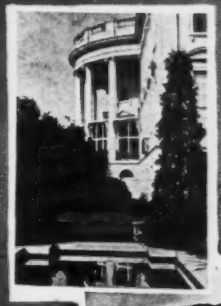
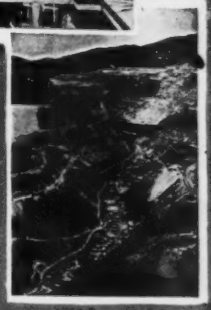
The MINING CONGRESS JOURNAL

Volume 10 MARCH, 1924 *No.* 3





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Modesty In Claims

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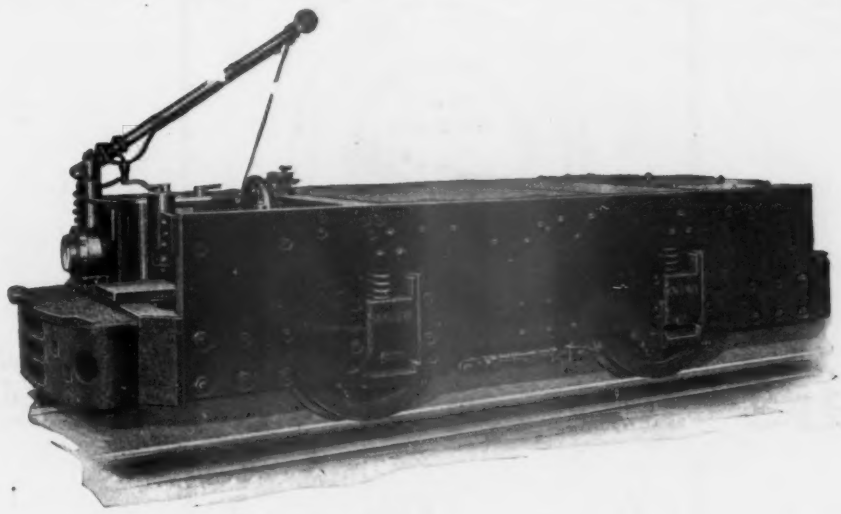

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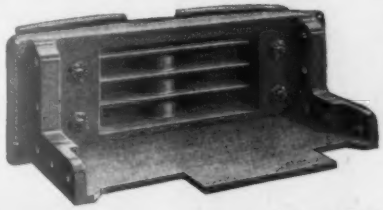

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MARCH, 1924

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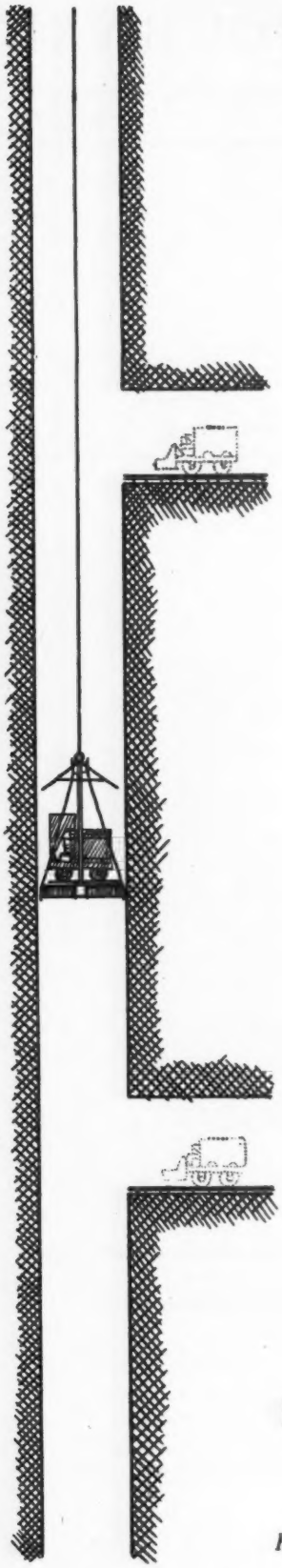

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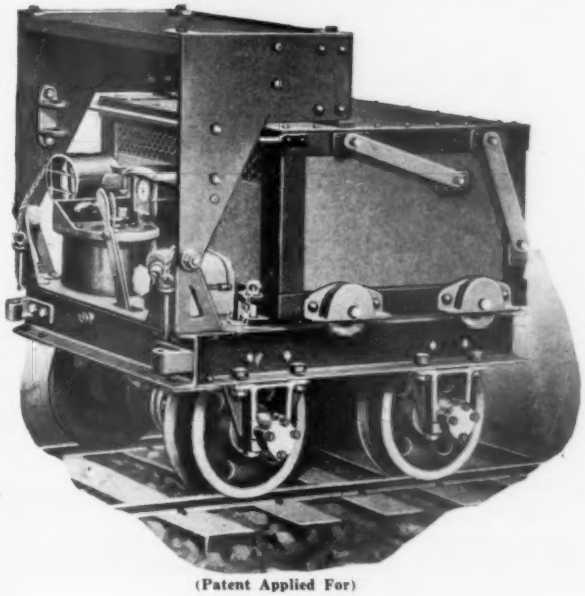

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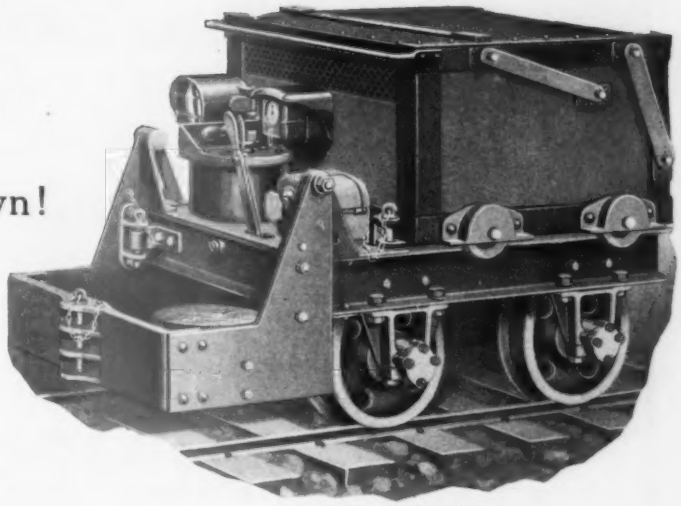

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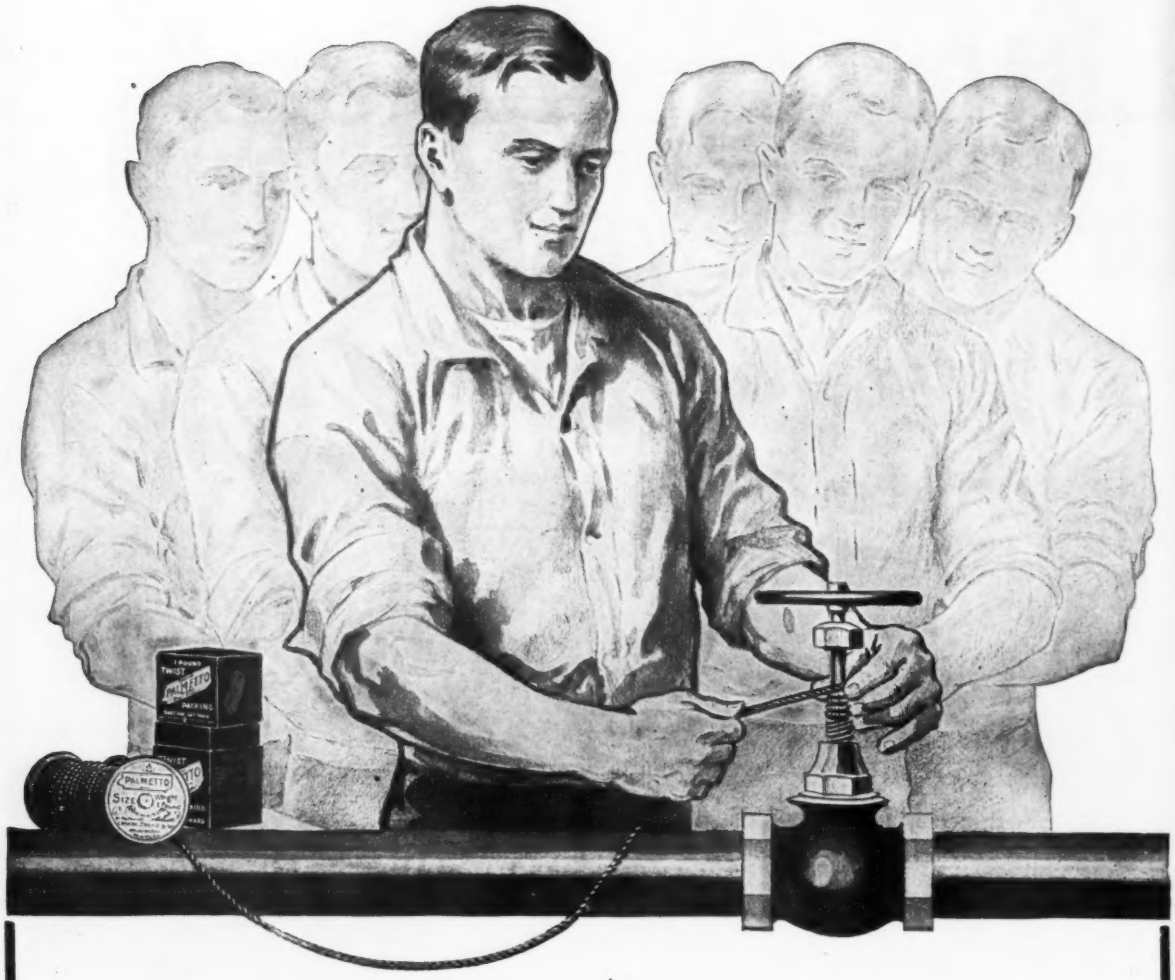

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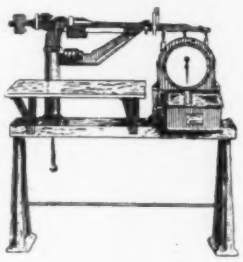

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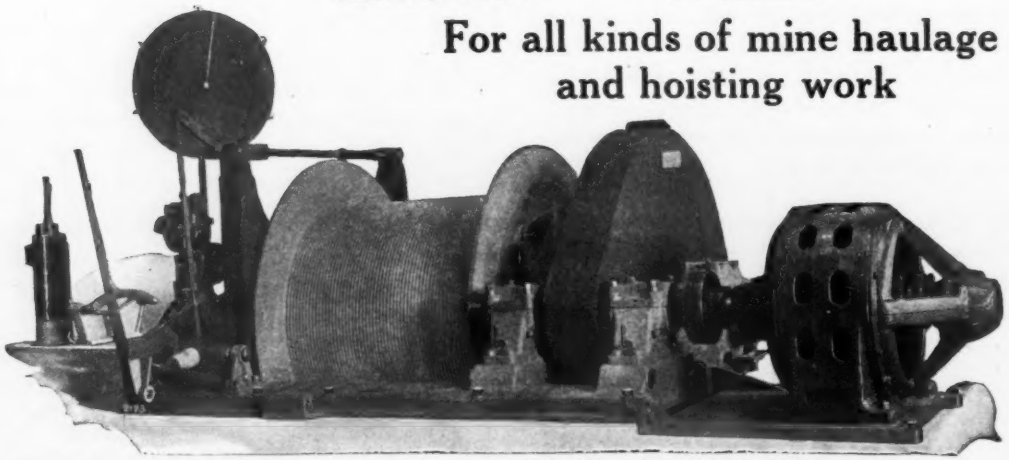

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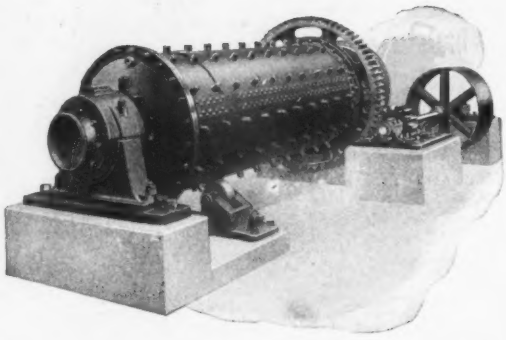

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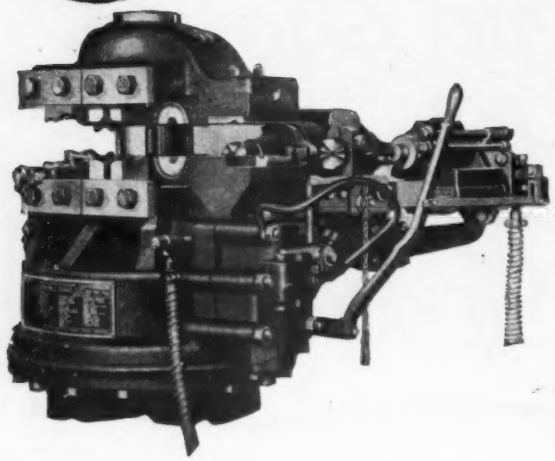

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Investigations And Coal Costs

IN these days of continuous industrial investigations by governmental authorities we may well inquire as to the results sought and the fundamental principles involved in these repeated investigations as to the cost of production.

The Federal Coal Commission spent $600,000 of the government's money and forced the coal operators to spend from three to five million dollars of their own money in furnishing statistics as to the cost of coal production. The general facts sought in this investigation were known to every person of intelligence before it began. Now that it has been completed no additional summary is available. The cost of the production of coal depends upon many different factors: the extent and character of the deposit; the cost of labor and the character of machinery used in its extraction; and the cost to the consumer depends still further upon the cost of transportation and the charges of the various middlemen through whom it is delivered.

The actual cost of production, as every one knew before the investigation started, differed so greatly in different localities and with different characters of deposits as to make price fixing unjust and impossible, even supposing a right in the government to fix prices. Any governmental fixed price which would enable the high cost mines to operate and make a fair profit would necessarily permit the low cost mines to make an unconscionable profit.

The fixing of a price for coal would have a still more drastic effect upon the consumer's cost than the fixing of the wage scale by organized labor. The net result of this process is to give to the poorest workman the same wage as is paid to the best workman. There is but one remedy which can ever successfully solve the coal problem, viz., the creation of those conditions under which the lowest cost mines can operate continuously. The law of fair competition would immediately apply and so long as the lower cost mines can supply the demand for coal the higher cost mines will be automatically put out of business.

This appears to be a drastic solution but it is the only solution which is fair to the public. The coal commission, after an extended investigation, made no recommendations looking to this end. It did make recommendations which will strengthen the arm of those having power to interfere with the continuous operation of coal mining.

In the bituminous coal mining field, with its capacity to produce 60 percent more coal than the markets can possibly consume the higher cost mines can only operate when the continuous operation of the low cost mines is prevented. Did the coal commission suggest any remedy for that condition which enables organized labor to curtail the output and at times to prevent the operation of the low cost mines?

When the market price is such as to justify the operation of the high cost mines the low cost mines have the benefit of the high priced market and for a short period take from the public the higher cost which enables them to make an inordinate profit but which they are shortly again obliged to lose by a period of idleness, and the consumer pays the price.

These conditions are repeated over and over again and none of the many investigations has done else than add burdens to the price, for which the consumer must pay.

This is not a criticism of the coal commission. It is a criticism of that Congress which created it. No fair commission can be created without having all sides of the controversy represented thereon. The report of such a commission must necessarily be a compromise. The cost of production should have no direct effect upon price, but the cost of production should have an indirect effect upon the competition which would be induced by exorbitant profits, and in return that competition would control price and bring it down to a proper level.

Whenever a governmental investigating committee begins its work by an investigation of production costs we may well assume that it is groping in the dark for a remedy—that it has no constructive plan in contemplation and that its only result will be to amuse the public while it is getting used to the conditions which are complained of.

The interruption of the operation of low cost mines always results in high priced markets, and the loss will eventually be borne by the coal consumer. The millions of dollars spent by the coal commission and by the operator in meeting its demands will eventually be paid by the coal consumer. The greatest service this Congress can render to consumers of coal is to give its willing assent to the inevitable law of supply and demand, to place the coal operator in the same situation as the miner—to provide that the Sherman anti-trust law shall be effective as to both or to neither.

If Congress will give the coal industry an opportunity to solve its own problems free from restrictions and it fails to give the public a continuous and ample supply of coal at a reasonable price it will then be ample time for governmental investigation and not until then.

SOCIALISM VS. COMPETITION

SOCIALISM never has been, and never will be, a substitute for competition in the protection of the rights of the consumer.

What is the inspiration which leads to the most efficient effort? The individual works for himself not for the state; having utilized his ability and service to produce a commodity, he is under no obligation to dispose of it at the price fixed by others too lazy, two indolent, or too ignorant to produce the same article. He may dispose of this article upon terms which are satisfactory to him or he may keep it for his own use.

His only reason for producing more than enough to meet his own requirements is the possibility of exchanging the surplus for other articles which he also needs but cannot advantageously produce. This exchange may be by the indirect but more convenient method of a sale for money, the common denominator of value. With money he may at any time supply his other needs or he may in this form store up wealth to meet future needs.

The government has a right through its taxing power to take a just share for its support and to require that the property shall not be so used as to interfere with the health and safety of others but it should have no other powers. If he is the owner of land, he must pay taxes for the support of the government and for the protection of his property rights but his obligation to the public ceases at that point.

Why pay taxes, why own land, except for the profits which may be derived from its use? How long would it be possible to continue the payment of taxes upon any large amount of unproductive property?

The owner of property, whether it be coal property or otherwise, is bound to produce or lose his property sooner or later. He is bound to sell its production at some price. His interest leads him to get the best price obtainable. If coal is scarce, he can secure a good price; if coal is plentiful, he must take what he can get. That same rule applies in the same way to every other manufacturing concern. If competition is strong, he may not be able to find a market and his plant must close. Just now more than one-third of the bituminous mines are closed; more than another third are only working part time and much less than one-third are operating at a profit and these not because of skill in coal mining but because of superior salesmanship.

In the face of these conditions and these principles, it is difficult to follow the reasoning of those who desire that laws shall be enacted declaring that coal is charged with a public use and therefore subject to public control. This proposal points directly to state socialism.

We have been charged with being a reactionary. If to stand by those principles under which this country has grown to be the greatest country in the world is reactionary, we are proud of the distinction. Governmental greatness, in all that the term implies, does not come to people where no rewards are given to superior individual effort which makes for efficiency, large production, low prices through competition and the maximum of comfort to the majority.

All of the world's supply of coal, for this and all future ages, is now available for immediate production. Because of this, socialism as applied to coal production, will be more disastrous than in any other field.

Socialism never has been and never will be a substitute for competition in the protection of the rights of the consumer.

TAX REDUCTION

THE outlook for a reduction in federal income taxes that will give substantial relief to business is not encouraging. Notwithstanding the fact that expressions of approval on the scientific plan proposed by the Secretary of the Treasury have been voiced in all sections of the country, it now appears that this plan will be rejected and that a substitute measure fixing the high war surtax rates at a maximum somewhere near that provided in existing law will be put through.

Secretary Mellon proposed to reduce both normal and surtax rates. Normal rates would have been reduced 25 percent and surtax rates to a maximum of 25 percent if his proposal had been accepted and passed by Congress. Treasury actuaries said the plan was sound. Treasury statisticians testified as to the increasingly unproductiveness of the high war surtaxes. Treasury officials offered convincing evidence that the plan would produce adequate revenues.

The public understood clearly that the plan proposed by the Treasury Secretary meant a substantial reduction in taxes and relief not only to business but to the consumer, upon whom the burden ultimately falls in pyramided form. The public believed that the Treasury actuaries, statisticians and officials were capable of determining what measure of relief would be best for the country and for the treasury. People believed they understood the Mellon plan and promptly endorsed it.

Taxpayers wrote letters of approval to the Secretary of the Treasury. Senators and representatives were deluged with letters, resolutions, petitions and telegrams. Then someone suggested that the people were being victimized by propaganda favoring the Mellon plan and the question of tax reduction became at once a political issue. Letters, telegrams, resolutions and petitions urging adoption of the plan were either ignored by those who wanted to substitute a plan of their own or were consigned to the waste basket.

Those who oppose the Mellon plan have resorted to arguments entirely distinct and apart from questions as to its soundness, its feasibility and its suitability as a measure that will relieve the pressure on business and the indirect burden on the consumer. No one has been able to show that it is unsound; that it will not help the consuming public as well as all classes of taxpayers except corporations; or that it will not produce adequate revenues to meet the needs of the government.

The Mellon plan would afford direct relief to several million taxpayers and would afford indirect relief to fifteen million farmers and wage-earners who pay their federal taxes indirectly in pyramided form through the numerous agencies of production, manufacture and distribution upon which the high war surtaxes exert their stifling influence. It appears now that a substitute measure will pass Congress that will relieve individual taxpayers whose incomes are relatively small to a greater extent than the Mellon plan. But the high war surtaxes will be allowed to remain at a high maximum and fifteen million or more farmers and wage-earners who now file no returns and who pay no direct income taxes will be afforded little or no relief from the indirect taxes pyramided and reflected in the price of every article produced, manufactured, sold and consumed, unless the temper of the people is aroused to the point where their desires must be granted.

THE ISSUE BEHIND TEAPOT DOME

THE Teapot Dome oil lease investigation has focused public attention upon the question of the future control and development of our natural resources. This in turn affords an unexcelled opportunity for the so-called "progressives" to launch a concentrated political effort to bring about a policy of governmental regulation, with the inevitable tendency toward governmental control and governmental operation.

The focusing of public attention upon these investigations and the disclosures which have been made have given to the progressive group in Congress an issue upon which to build up a great campaign for the further development of governmental control in industry.

The senior senator from Wisconsin, Mr. La Follette, momentarily emerged from behind the smoke screen of the investigation epidemic and announced unqualifiedly his position in regard to our natural resources.

The thing of importance to the mining industry in Mr. La Follette's speech on the floor of the Senate on February 11th is his reference to the mining industry, as follows:

> ***"The great wrong to the people of this country consists not in the individual policy in this single transaction but in the general policy which barters to private interests the great oil and coal deposits and other natural resources belonging to the government which should be held for all time for the benefit of all the people. The policy which permits officials to barter away to private individuals these great resources of the government is sure to result in just such scandals as the present. The only way to prevent such a scandal is to change the policy. I hope * * * that out of this investigation will come a restoration to the public of thousands of acres of public domain and hundreds of millions of dollars worth of property of which they were wrongfully deprived. But whether this is accomplished or not, the price paid will not be too dear if it shall bring about a reversal of the policy by which the public domain and our natural resources are being, and for more than a score of years have been, turned over to private monopolies for their gain and enrichment."***

It must be remembered that the Republican party, even when unified, has only a scant majority in the present Congress. Each major party is itself divided by opposing groups actuated by principles or motives frequently far more divergent in character than those which separate Republicans and Democrats. It therefore is logical to expect during the next six months a continued effort to bring about the development of a public policy which will have for its purpose the direct control and perhaps direct operation of all of the great natural resources by the government.

Since the Roosevelt administration the policy of the government in regard to natural resources on the public domain has been public ownership and private operation under the present leasing policy. When Senator La Follette speaks of a reversal of this policy it can mean only one thing, namely, the establishment of a policy of governmental ownership and of either private operation under stricter governmental control or governmental operation.

The significance of such a movement is very great. Mining men should keep these facts in mind. THE MINING CONGRESS JOURNAL will attempt to present what has been accomplished under the system of governmental ownership and private operation of natural resources in the belief that this issue will be a paramount one in the political campaign and that it is essential that the 27th Annual Convention of the American Mining Congress at Sacramento should consider ways and means by which the real truth can be effectively presented to the American public.

NO PROGRAM POSSIBLE

IN the early days of railroad building, one of the western lines had in its employ some engineers who had gone through college; it had also some rough-and-ready builders. One night one of the bridges was washed out by a flood. The following morning the general superintendent called into his office some of the graduate engineers and asked them how long it would take them to replace the bridge. By noon, they announced that, with prompt dispatch on the delivery of material, they would be able to bridge that stream within two weeks.

"That is very interesting," said the general superintendent. "But that bridge was washed out last night at half past nine. Old Barney, our bridge builder, had trains running over it this morning at four o'clock."

In the coal industry we are having a conflict between the formal-graduate-academic and the rough-and-ready method. The engineers and the formalists have their methods. They are precise. In time, they will get, perhaps, exquisite results. Everything will be done according to Hoyle. But the situation will not always wait on such deliberation.

For instance, today the operators in the coal industry are fighting the fight of self-preservation. They cannot wait too long on the deliberate method of getting at things. In detail the cost of production has gone up to such a point that other fuels are cutting into the markets formerly occupied by coal. As those fuels, such as oil, slip into the market, they are establishing a place for themselves. Coal, to hold its own, has to satisfy not only as to convenience but as to price. In fixing the selling price of coal, the operator has to be governed by cost. In shaving the cost, the operator has to rely upon machinery rather than upon hand labor. And, in deciding to use machinery, the wages of the machine runners and their willingness to work are all-important factors.

The strictly formal, or governmental, method of procedure would be to bring the whole question of the use of machinery before a tribunal for determination as to the cases in which the machine could be used, the rules governing their use, and the rate to be paid to the men who operate them. That would honor all of the formalities and pay proper respect to the position of the union.

Being bound to the formalities, the union and the organized operators are approaching the machinery question with great dignity and deliberation. There is so much formality that, up to now, the subject has hardly been discussed. After nearly two years of bickering, there is no provision for the introduction of even loading machines, and the scale has not been made; every user of the machine is paying the wage with which he can get by.

In the meanwhile, the non-union operators are not quibbling. They are using not only loading machines but mining and loading machines. They are introducing the sort of machinery which anyone with a little common sense can run. And they are paying the rate which the unskilled worker demands for his labor. What is more, some of these machines are turning out as much coal in a month as the union miner will turn out in a year. Formality and discussion are dispensed with; the machines are introduced and used.

The point of this story is that when competition and human ingenuity are involved a program cannot be made. If it is made, it will not be lived up to. The effort to stick to the program only means that the man who follows it will fail.

A COSTLY TAX SYSTEM

THE difficulties which corporations have encountered during the last six years in having their income and excess profits tax liabilities adjusted, have been almost insurmountable. The overhead expense which corporate taxpayers have entailed in complying with the federal tax laws has been enormous. The government has collected these taxes at a cost of about $1.50 per $100 assessed; but taxpayers have had to expend an amount variously estimated at from $5 to $10 per $100 returned to prepare returns, schedules, briefs, and reports; to be represented at hearings and conferences; and to provide assistance to the department in making its field examinations. And this expense imposed upon corporate taxpayers does not take into account the time and worry which their executives bear in devoting the necessary attention to these matters. Most corporate taxpayers, besides having their executives employed for days and weeks at a time in working out their income tax statements in the first instance, are put to great expense in employing a staff of lawyers and tax experts in the second place to argue the case out with government officials anywhere from one to six years after the returns have been submitted.

The revenue department, of course, has its difficulties, and taxpayers generally have been patiently awaiting the time when forms will become standardized, methods stabilized, government personnel thoroughly trained, and the law clarified and simplified.

THE MUSCLE SHOALS PROPOSITION

MORE than $100,000 has been spent by the government in the development of the Muscle Shoals proposition. This expenditure was made out of the money subscribed by the citizens of the United States in the form of Liberty bonds, and must be met by the taxpayers of the United States. The prime purpose of the entire project is for national security and defense.

The MINING CONGRESS JOURNAL neither pleads the cause of the southern power companies nor opposes a proper offer if submitted by Mr. Ford. It does maintain in behalf of the American people and of the industries upon which prosperity depends that this great natural resource, potentially aggregating 900,000 horsepower, shall not be delivered to any individual or corporation for any such paltry sum as $5,000,000, or without greater guarantees than those as yet offered by Mr. Ford. The exclusive right to the use of this power in industry is worth many millions of dollars in the open market. It should not be secured by anyone at such a tremendous advantage over all other power users as the Ford interests now offer. It will increase in value as our coal deposits are exhausted. As storage reservoirs and power dams are built above it, it will obtain a great increment in primary power.

The minority report of the Military Affairs Committee of the House cites an illuminating parallel, when it says:

"We can not foresee, but we can find some guidance. Let us suppose that a little over 100 years ago the early Congress of the United States had said to Benjamin Franklin, an outstanding genius of his time: 'We wish to make you a proposal. We are intensely interested in the development of your theory of electrical energy; we realize that its development is in its infancy; we realize that a development of this unknown force will mean much to our national program of economic expansion and defense in time of war. In your State of Pennsylvania there is much public land which contains coal known as anthracite; the coal is practically valueless, but it may have possibilities of development. If you will guarantee to develop a unit of electrical energy which will produce 50 horsepower and deliver this continuously for 100 years we will turn over to you these coal lands in Pennsylvania. The amount of electrical power we are asking you for is an incomprehensibly large amount. We feel that it can be developed, that you are the only man that can develop it, and we feel that with the present needs of this country and future needs in view we are making a splendid bargain.'

"What a bargain that would have been! And yet, in the light of the time, that would have been a much more defensible policy than the acceptance of the Ford offer. With the development in organic chemistry which has taken place in the five years since the end of the war and the number of processes for fixation of nitrogen which are rapidly developing, it is surely comprehensible that long before the 100-year period proposed in Mr. Ford's offer shall have elapsed, or even 25, the fixation of nitrogen will develop to a point making the amount of nitrates contemplated in any of the offers now before Congress an equally absurd recompense for the great economic value of the power which it is proposed to turn over to Mr. Ford."

The MINING CONGRESS JOURNAL believes that America's greatest power resource, carrying with it 900,000 available horsepower and equipment with an absolute scrap value of over $11,000,000 should not pass to any party or group of interests without adequate, specific and definite guarantees commensurate with the best interests of the whole people in the states concerned.

To lease Muscle Shoals under any other terms or conditions than those of the Federal Water Power act, which govern the distribution of power, would be unfair to those now operating under its provisions elsewhere.

As we go to press, the following item appears in the February 26th issue of the *Washington Post*. It is a highly significant confirmation of the thought expressed:

"A chemical discovery, said to be one of the most important of the twentieth century, has just been made at the Fixed Nitrogen Research Laboratory at Washington, Prof. Arthur B. Lamb, of Harvard, announced here tonight.

"The discovery is that of a new catalyst, which will bring about the permanent union of hydrogen and nitrogen atoms, and will yield 14 percent of ammonia, Prof. Lamb said.

"According to the announcement, two great benefits will be derived from the new product. The United States, it is held, will have at its command an explosive twice as effective as that discovered by the Germans a few months before the start of the world war. The American farmer will also, according to Prof. Lamb, have the use of a fertilizer much cheaper and more effective than heretofore available.

"The new catalyst, it is contended, has far greater durability than that discovered by Haber in 1914, which yielded 7 or 8 percent of ammonia."

The February issue of the MINING CONGRESS JOURNAL definitely outlined the platform of the American Mining Congress in regard to Muscle Shoals. It takes this stand because it believes that it speaks for the best interest and the highest welfare of the greatest number in this definition of the Muscle Shoals policy.

THE INEVITABLE

CERTAIN eccentricities in the statistics of coal shipments have lately been challenging attention. That is, in 1918, when we were in the World War, our railroads, on one or two occasions, loaded and moved a million cars of all kinds of freight in a week. That was done only by the most orderly arrangement of shipments and by, in a fashion, routing the nation's commerce in prescribed directions. In 1920, we tried to do the same thing without using the war machinery and the orderly process; this brought on a panic. In the summer of 1923, we did the same thing but with such ease that men believed business generally was not quite brisk. Now, when we have just completed two months of the new year, our loadings of all kinds of freight are again up to a million cars per week. Men have become so accustomed to such big things, by now, that they are saying business is poor.

These three or four enlightening experiences with the loadings of general commerce serve to call attention to corresponding figures which reflect bituminous coal shipments. In 1918, the bituminous coal movement rose to nearly 580 million tons; in 1920 it fell off to 556 million tons, and in 1920, with a movement of only 550 million tons, we accumulated stocks exceeding 60 million tons.

Formerly it was true that the rise of loadings of general commerce was followed exactly by a rise of coal shipments. Recently, however, the railroad loadings of general merchandise have risen while the shipments of coal have been on a progressive decline.

This sharp contrast challenges attention. The figures stare the industry in the face and demand that they be understood, if the future of the industry is to be even reasonably safe. The first great matter which proves worthy of consideration is that the loss of the biggest coal tonnage was in the period when coal prices were about the highest in history. The operators have been able to justify their prices to the users on the score of the high cost of labor. The miners have justified their wages by pleading the hazards of the industry and by other things. The public has listened to both but has failed to respond in a way that is satisfactory to either. The users of coal have not been willing to pay the price of coal but have turned to other forms of fuel. Thus we find that the period of coal tonnage decline has been the period when the use of oil for fuel has made its greatest advance. This means that the people have simply exercised their inalienable right of selection and have chosen cheap oil instead of high priced coal.

The second matter which challenges attention is that the declining market for coal has been an expanding market for electric power. And, in that same period the consumption of coal per kilowatt hour has dropped from five to two pounds. The people have found in electricity a cheaper and more convenient form of power—a discovery that they probably would not have made had it not been for the eight-year period of high coal prices.

These shifts were inevitable; they had to come. No business can remain for long in the lowest form in which it is found in the hands of untutored and unskilled men. The Nation is progressing from the crude to the higher expressions of business.

While it is inevitable that the market demand will shift steadily away from coal in its crude form, it is equally inevitable that the industry itself will, because it must follow its trade. The quick change of the market which now threatens will but mean an equally swift change of the coal industry. The men who do business in coal will follow the opportunity wherever it may lead. Thus if the people want, no longer, the crude coal product, but show a disposition to take it in translated form, the present and more progressive operators will learn to profit by translating their own product into that form which is acceptable to the users.

A CORPORATION'S INCOME TAX TRAGEDY

OCCASIONALLY a taxpayer explodes and his language on such an occasion generally would have to be indicated in print by dots, dashes, question marks, exclamation points and asterisks. Seldom does a taxpayer see any humor in the situation. The MINING CONGRESS JOURNAL therefore gives to its readers the following extract from a letter which one taxpayer is said to have sent to the Commissioner of Internal Revenue:

"In all we enclose sixteen reports, all of which contain our affidavits the swearing to which added only a few drops to the great dark sea of oaths which have audibly or silently marked the slow development of these reports. Being naturally of an optimistic disposition, the writer feels that we made considerable progress in furnishing the information requested concerning the ancestry, pedigree and moral turpitude of these poor unfortunate and helpless corporations.

"In this connection we are enclosing about a pound of perfectly good waste paper made up in the form of unsupporting schedules as requested. We are quite sure you will find them approximately correct. We have had the assistance of the chief statistician and corporation adviser of the tax department of the best bank in ————————; also the help of nearly all the inspectors, auditors, tax experts and other employes in the Internal Revenue office here; also the advice of the best criminal lawyer in ————————.

"In making up these reports we have employed two bookkeepers day and night, and have worn out two Underwood typewriters, a Remington billing machine, and have spoiled the disposition of our Burrough's adding machine. We have also had the advice and sympathy of numerous business associates, friends and relatives, and last but not least, the head of the leading board of auditors in this city has volunteered to give the benefit of his advice and experience (for a consideration, of course) in tangling and otherwise mutilating these reports as soon as he has sufficiently posted himself on the meaning of the law and the use and purpose of various blanks in making out the consolidated reports.

"From the above we hope you will gather that our motives have been right and honorable and that it has been our earnest endeavor to make these reports so clear and complete that those in authority at the Revenue Bureau in Washington, where these infernal reports were first iniquitously conceived, can readily understand. If any further supporting or unsupporting schedules are required, we will as cheerfully as possible stop business again until such reports and schedules can be worked out.

"In the meantime and always our latch string is out and visitors are welcome. We have several large hotels in ———————— of convention size sufficient to accommodate the usual size committee of government inspectors and auditors and we shall welcome any investigation of our system of bookkeeping and report making with special reference to these federal reports. Such inspectors may have the use of our books and papers at any time, preferably nights and Sundays. Office rent will also be free. As we are short of office furniture, we offer the suggestion that it would be a good idea to have such equipment as a committee may need sent here in advance of their arrival.

"Looking forward to a prospect of a few days of rest and uninterrupted attention to our own business of earning a living between now and the middle of July when the next flock of reports will be due, we remain."

DEAD RECKONING IN COAL

Decisions Made In Conference And By Commissions Are Being Reversed In Practice, And Coal Is Working Out Its Own Program Without Assistance—The Wage Conference And The Market

By GEORGE H. CUSHING

A STUDIOUS gentleman who was a college graduate was standing one day watching the operations of a saw-mill. He decided that the saw would be more effective if it revolved in the opposite direction. Not knowing anything of the mechanism which drove it, he tried to reverse it. The saw continued to run in the same old direction, but he spent the rest of his life without one hand and part of one arm. Aesop would have drawn a fable from this incident, but we can get its meaning without his assistance.

Some gentlemen with college educations have recently been observing the operations of the coal industry. They think—and say—it would do better and run more smoothly if it were a monopoly instead of competitive; if the labor were all in one group instead of being divided between union and non-union; and if it consisted of big mines, controlled by big companies, instead of having small mines, owned by individuals. Some of these gentlemen with college educations have written reports containing their observations and believe Congress is now considering them. When the first layer of dust was collecting on their tomes, the miners and operators got together at Jacksonville, Fla., to sign a wage agreement between the operators and the 60 percent of union labor that mines coal east of the Mississippi river. They have signed a contract and are about to discover that this machine is going to run its own way, as this article will proceed to illustrate.

The four districts which joined in this wage conference embraced western Pennsylvania and the whole of Ohio, Indiana and Illinois. For the purpose of illustration and illumination, it is enough to consider Illinois alone. The railroads which serve the Illinois mines do not quote freight rates that will get Illinois coal into Indiana. The railroads probably believe that Indiana can produce its own coal. But Illinois has a tremendous market of its own in Chicago. Of late it has been getting quite a market over in Michigan. For a long time it has had a big market in Iowa and Nebraska. And, in the last ten years it has been getting an ever-widening market in the Northwest. If the operators of Illinois wanted to satisfy their miners they had to give them two things, namely, first, a rate of wage that would persuade them to work, and second, enough work to do so that the wage would pay the miners' cost of living. If the rate was high and Illinois couldn't sell the coal, the rate was meaningless. The miners, of course, were merely interested in the rate; they left the matter of selling the coal to the operator. So the miners got the wage rate first and relied on the operators to sell the coal and bring in the money.

The operators, while paying the same rate, have found recently that they couldn't sell coal as formerly, in Michigan, because that market has gone to non-union fields. They couldn't sell as much coal as formerly in the Northwest, because non-union coal could reach that market by way of the Lakes. They couldn't sell coal in Iowa and Nebraska, because oil and non-union coal were being sold there at lower figures, ahead of them. And even in Chicago, which is Illinois' own biggest market, the tendencies of ten years have been reversed, and non-union coal is flowing increasingly into that market.

The gentlemen who wrote about this sort of thing said that the union could dominate these various markets, because they were "the natural markets" for this coal. The Interstate Commerce Commission tried to assure those markets to the operators by freight rate differentials. The union, thinking that the operators thus had a monopoly, insisted that the operators ought to pay a monopoly wage. So, believing they had an artificial market, they built up an artificial wage scale. Illinois, as a consequence, has a wage scale which is satisfactory to its miners. It has a market vouchsafed to it by a freight rate situation and by a report of the Coal Commission. On paper and on theory it is "sitting pretty" but in actual practice, it has only half a market because other and lower-priced fuels are occupying that market and Illinois is crowded out.

The natural result is that the experience of the student in the saw-mill is going to be duplicated. Somebody is going to spend the rest of his life without his right hand and part of his arm. At this early period, it looks as though the sufferer were going to be the miners' union. Also, some operators are going to lose some fingers off their hands, if, indeed, they do not lose their whole business lives. In this particular, it seems rather dangerous to monkey with a buzz-saw.

Some gentlemen with college educations went some months ago to members of the United States Senate and submitted long reports which, on paper, proved beyond a peradventure that the only efficient mine is the big mine, and that the only way to handle the coal business is in big units. Some members of the United States Senate accepted this theory and made long and learned speeches on the subject. It is pretty easy, on paper, to determine the merits of anything that is big. A colossal picture always appeals more to the imagination than does the pigmy. We don't like Liliputian things. Our egotism makes us like big things. So, it was easy to picture the coal industry in future as run by big corporations, controlling big mines. It is so easy—so the legend runs—to spread big overhead over a series of big mines that one is easily deceived by the effect that such things have.

What we apparently have left out of account is one simple fact. If we have 7,500 mines and need only 5,000, then part of 2,500 mines are going to die. In the wild scramble for existence they are going to be killed off. That sort of thing always brings into play the law of self-preservation. Whenever that law begins to operate, men become rather unlovely things to look at, or to deal with. When we see a man backed up against the wall with his life at stake, we begin to realize for the first time that he has tearing fangs and that he can unsheath them. When a man is driven to that necessity, he doesn't follow the soft laws of economics which college-bred gentlemen discuss in committee rooms of the United States Senate. He follows the law of the jungle—whether we like that law or not. That is what is happening today.

For instance: In central Pennsylvania, there is a non-union field squatted between two union fields. Some of the non-union operators have decided that they can sell more coal if they do not have to pay quite such a high wage. Their men have decided that if they have a lower wage and more work, they can earn more money. So, these non-union operators and non-union miners have agreed, in some places, to go back to what is known as the 1917 scale. This makes a reduction in the labor cost of production of about 50 to 60 cents a ton. With that difference in cost and in selling price, the non-union operator is get-

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THE REVENUE BILL OF 1924

Reduction Of Taxes Practically Assured—Some Administrative Changes Clarify While Others Complicate The Law—Mining Industry Affected By New Depletion And Discovery Provisions

By McK. W. Kriegh

TWO propositions are involved in the proposed revenue act of 1924 now pending before Congress. The first is to reduce taxes. The second is to simplify the revenue law. Both are possible and necessary. The reduction of taxes will stimulate business. The simplification of the law will expedite the collection of revenues and remove many uncertainties which have handicapped taxpayers.

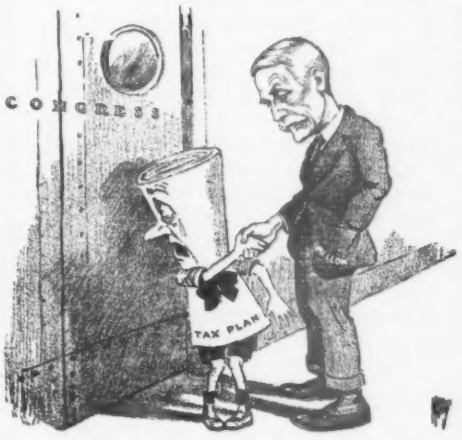
The bill proposes to make the reduction in tax rates applicable to the calendar year 1923. This is possible because of the Treasury surplus of more than $300,000,000 for the fiscal year 1923. Both normal and surtax rates would be reduced if the bill becomes the law. The normal rate on individual incomes would be reduced 25 percent on all amounts up to $5,000, and on so-called earned incomes up to $20,000. The surtax rates would be reduced to a maximum of 25 percent.

The bill would make many changes in the administrative provisions of the law. These changes may be classified as those designed to prevent the avoidance of the income tax and those designed to expedite the determination of tax liability. It is alleged in the report submitted by Chairman Green of the Ways and Means Committee that methods of tax avoidance exist under the present law which are being commonly availed of by taxpayers. It is stated that the provisions of the law pertaining to payment and collection of taxes have been involved and confusing. According to the report, it is proposed to close the gaps through which taxes may be evaded, and to clarify the law so that taxpayers may secure prompt adjustment of their tax liabilities.

Perhaps the most important feature of the bill from the standpoint of the taxpayer is that providing for the creation of a Board of Tax Appeals. The Treasury draft of the bill would have made the board a unit of the Treasury Department. The bill as introduced by the Ways and Means Committee Chairman provides for the establishment of the board entirely outside the Treasury Department. Its members will be appointed by the President.

This action on the part of the committee is in accord with the recommendation of the American Mining Congress, made first in 1920, "that the board shall be an independent body, separate and apart from the Bureau of Internal Revenue and the Treasury Department."

The divisions of the board are to sit locally throughout the United States, if the committee plan is enacted into law. Taxpayers would be given a reasonable opportunity to appear before the several divisions with as little inconvenience and expense to themselves as is practicable. The procedure which taxpayers are compelled to follow under the present law is enormously expensive to the taxpayers as well as to the Government. Under the proposed plan much of the expense to taxpayers would be eliminated.



N. Y. Times.

Tax Plan—"Good-bye, papa. I hope you'll know me when I come out!"

Procedure In Appealed Cases

The taxpayer may, prior to the payment of an additional assessment, appeal to the board and secure an impartial and disinterested determination of the issues involved. "In the consideration of the appeal," says the report of Chairman Green, "both the government and the taxpayer will appear before the board to present their cases, with the result that each member of the board will sit solely as judge and not as both judge and advocate.

"The provision allowing the Commissioner to sue in court for the recovery of any taxes thought by him to be due in excess of that decided by the board to be due relieves the board from the responsibility of finally passing upon questions involving large amounts and removes the necessity for a decision in favor of the Government in order to force the issues into court."

Discovery Value

The existing law limits discovery depletion to the operating profit from the property upon which the discovery is made. The bill limits discovery depletion to 50 percent of the operating profit upon which the discovery has been made. The limitation in existing law has made little difference to the metal-mining industry. The limitation of discovery depletion to 50 percent of the operating profit probably will affect only one or two of the few metal mines which have been allowed discovery value.

Irrespective of the considerations which led the Treasury Department and the Ways and Means Committee to propose this limitation, the principle is bad, for it will have the effect in many cases of defeating the very intent of the discovery provision. The Government has recognized that a gift becomes the capital of the donee to the extent of its value when received, and that this capital is returnable taxfree upon sale of such gift. The recipient of a gift risks nothing; the prospector for mineral risks everything. But Congress, although in effect recognizing that the value of mineral discovered is capital, by the proposed limitation denies the taxpayer the benefit of it.

The discovery provision is a necessary encouragement to the development of western metal mining. There will be little incentive for prospecting and exploration if the fruits of success are to be taken away from those who assume the risks of prospecting and developing mineral properties. Congress recognized this fact in 1918 when the discovery clause was first enacted. If Congress had not granted this relief, many properties that were brought to the production stage where their products contributed to the prosecution of the World War, would have remained undeveloped.

Depletion and Depreciation

The basis for determining depletion and depreciation is set forth in section 204 of the proposed bill. The general

theory of this section is that where no gain or loss is recognized as resulting from an exchange, the new property received shall, for purposes of determining gain or loss from a subsequent sale and for depreciation and depletion, be considered as taking the place of the old property given up in connection with the exchange, and where in connection with a reorganization assets are transferred from one corporation to another the assets so transferred shall retain the same basis in the hands of the new corporation as they had in the hands of the old corporation.

This section contains five different dates which will constitute the beginnings of time for different classes of acquisitions, reorganizations and transfers. Cost is made the basis for determining gain or loss from a sale, and for depletion and depreciation, in the case of property acquired after February 28, 1913, for cash. If the property was acquired by gift or by transfer in trust, the basic date is December 31, 1920. In the case of a reorganization, where property is transferred, and where 80 percent or more interest remains in the same persons or any of them, December 31, 1917, is the basic date. If the property acquired consists of stock or securities distributed to a taxpayer in connection with a certain specified method of reorganization, December 31, 1923, is the basic date.

In all such cases, however, the basis of value of the property or assets is restricted to the basis allowed the donee, grantor, or transferor as the case may be. The basis for determining the gain or loss from the sale or other disposition of property acquired before March 1, 1913, shall be the cost of the property or its fair market value as of March 1, 1913, whichever is higher. The committee report points out that "this provision changes existing law in the interests of the taxpayer. It simplifies exceedingly the rule in effect under the present law without appreciable loss to the Treasury."

Government Fixes Values

With respect to this proposed section of the law, which is ostensibly for the purpose of preventing alleged tax evasions through any plan of reorganization, it can be said without fear of contradiction that it will create new complications, reopen many cases that have been closed, and impose a hardship upon many taxpayers. The diversity of basic dates is sufficiently confusing that only an expert can be relied upon to unravel a specific tangle in which a taxpayer may find himself.

But the primary purpose which must have actuated the Department in recommending some of the changes which are incorporated in the bill, seems to have been that of perpetuating valuations already approved by the Department. In cases where the taxpayer was allowed only a small part of the mineral value indicated by the size of his plant, the extent of his operations, the record of his earnings, the quality of his reserves, and other considerations, and where, for any reason, he has failed to exercise his right to go to court for an adjudication of his claim, he will find the door closed to a reorganization of his company on any basis higher than the basis allowed originally by the Department.

Although the theory of depletion is that the investor shall receive his capital back tax free, the rule of thumb method adopted by the Department can not be applied equitably "according to the peculiar conditions of each case," as required by law, and a very large percentage of taxpayers have received but a small part of the value of their assets which otherwise they would have been entitled to receive tax free before these assets are depleted. It is not contended that taxpayers should be permitted to resort to subterfuge in order to secure that to which they are justly entitled; but certainly conditions which have been imposed by reason of arbitrary and analytic valuations should not be perpetuated, and Congress may be expected to go into this matter thoroughly before giving this section final approval.

Simplification Attempted

An attempt has been made to clarify the provisions of the law relating to payment and collection of taxes. Some of the changes obviously are beneficial to the taxpayer. The period within which an assessment may be made is extended so that a taxpayer may be given the opportunity of a hearing without jeopardizing the rights of the government. Arbitrary assessments of taxes just before the expiration of the statutory period for assessment have been a cause of serious embarrassment and hardship to taxpayers, and it is proposed to avoid such action in the future. The taxpayer is afforded the safeguard, not provided in the existing law, of a stay of proceedings by the collector to collect the tax, until a final decision is reached on his claim. The provisions relating to periods of limitation on credits and refunds, which in existing law vary from two years from the time the tax was paid to six years from the time the return was due, have been simplified by fixing the period at four years. The rate of interest on a deficiency has been reduced from 6 to 5 percent, on the theory, according to the Committee chairman's report, "that this is adequate compensation to the United States for the use of the amount of the deficiency by the taxpayer, no penalty being involved."

Dividend Provisions Changed

Another important feature of the bill is section 201 which deals with dividends. The presumption that every distribution is out of earnings and profits applies to all earnings and profits, whether accumulated prior or subsequent to March 1, 1913. A distribution out of earnings and profits accumulated prior to March 1, 1913, shall be applied against the basis of the stock for the purposes of determining both gain and loss from its subsequent sale. A liquidating dividend is treated as a sale of stock to the corporation. Amounts distributed in partial liquidation of a corporation shall not, to the extent that they are properly chargeable to capital account, be treated as distributions of earnings and profits for the purpose of determining the taxability of subsequent distributions by the corporations.

Section 201 (d) provides that amounts distributed by a corporation which do not constitute distributions of earnings or profits or increase in value of property accrued prior to March 1, 1913 (such as distributions out of unrealized appreciation in value of property or out of depreciation or depletions reserves) constitute a return of capital to the stockholders and are taxable to him only if, and to the extent that, they exceed the basis of his stock. This subdivision also provides that the amount by which such distribution exceeds the basis of the stock constitutes taxable income.

Exchanges of Property

Section 203 of the bill provides generally that gain or loss is recognized from all exchanges to the extent of the entire amount of the gain or loss except in specific cases enumerated in which it is not desired to tax the gain or allow the loss. The report states that "Congress has heretofore adopted the policy of exempting from tax the gain from exchanges made in connection with a reorganization in order that ordinary transactions will not be prevented on account of the provisions of the tax law. If it is necessary for this reason to exempt from tax the gain realized by the stockholders it is even more necessary to exempt from tax the gain realized by the corporation." Several new provisions appear in this section which do not correspond to any provision of existing law. Taxpayers should familiarize themselves with the provisions of this section and section 204 inasmuch as

(*Continued on page* 134)

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(*Continued on page* 134)

Cathedral of Saint Peter and Saint Paul © *Ernest L. Crandall.*

Where
Woodrow Wilson
Sleeps

INDUSTRIAL RELATIONS

Cooperation And Fairness Real Solution Of So-Called "Capital-Labor" Problem. Radicals Among Either Employers Or Employes Greatly In Minority. Labor Troubles Will Be Thing Of Past When Mutual Understanding Of Each Other's Viewpoint Is Reached

By ROBT. E. TALLY, *Jerome, Ariz.**
Chairman, Western Division
The American Mining Congress

THE important object to be attained by improving the relations between employer and employe is better government and better business. Progress in government and in business has been hampered by unsatisfactory industrial relations. The results of this condition, and the methods to be used in improving these relations, are the subjects of much discussion. Radicals predict a war between capital and labor more destructive than any conflict which history records; they claim that a world revolution will be the result of the oppression of labor by capital. No doubt the wish is father to the thought.

It is true that unfair treatment of labor by capital will encourage radicalism in politics and industry, and any movement that tends to improve relations between these two will be a step toward better government and better business. Industry is created by capital with the aid of labor. It functions for the benefit of the stockholders, the employes, and the public. Industrial relations, therefore, concern these three beneficiaries. Capital invests in industry primarily for the purpose of profit; employes labor in industry for the wages they receive and the public benefits from the production and expenditures of labor and capital.

It is therefore to the interest of all that the wheels of industry revolve; otherwise, profits to the owner are endangered, wages to the employes cease, and the revenue to the public is reduced. A country prospers as its industries prosper, and that which affects the industrial prosperity of a country likewise affects the prosperity of its people. When employer and employe realize that their interests are the same, when each performs his just duty to the other, labor troubles will become a thing of the past.

We have, on the one hand, the organized radicals, and, on the other, the unfair employer. Each class is in the minority. The large majority of employers and employes wish to be fair; difference of opinion is usually the result of a misunderstanding of the viewpoint of one or the other. Radicalism is not confined to labor or to labor unions; in fact, it is more prevalent among demagogues and in some of the so-called "uplift" societies. These organized radicals threaten the Constitution and hope to overthrow our present form of government; they paint word pictures of downtrodden labor held in serfdom by capital, and make false promises to improve the condition of the workmen. This naturally appeals to the workers, who are anxious to improve their lot in life. The best method of removing this menace is by education and by an exposé of the aims and methods of the radicals.

> **Employer should instill a personality, a spirit, into his organization—a progressive, kind, yet firm, spirit—the spirit of a square deal and good fellowship. An organization with fair, definite and strict policies, thoroughly understood and executed, has a personality similar to that of an outstanding individual, and, like this type of individual, enjoys a degree of success greater than the average.**

We are approaching that period in history when both the employer and employe must do his duty to the other. Neither party can afford to be unreasonable or unfair. Each needs the good will of the other and of the public. The attainment of this condition will automatically relieve radicalism and improve the efficiency of the employe.

The successful employer of today aspires to a condition of satisfaction and contentment among his employes. In the past, employes did not always receive proper consideration. This fact, together with the conditions created by the war, caused the pendulum to swing to the other extreme, with the result that some employers are now doing too much in the way of welfare work for their men. Workmen, as a rule, are of an independent nature. They resent patronizing and paternalism. They feel entitled to certain considerations, after which they wish to be let alone to work out their own salvation.

The employer should not give just cause for serious complaint. His policies must be fair in every particular, and he must see that these policies are understood by the employes and that they are properly followed. He must understand the life and work of his men, in order that he may appreciate their viewpoint.

Some of the largest and most successful employers have adopted what is termed the "employes' representation" plan. Under this plan regularly elected representatives of the employes meet with representatives of the employers for general discussion and joint decision of matters which directly concern the employes. This plan is very satisfactory for large organizations, and also for small organizations, where the work is scattered over a large area. However, there are conditions under which a plan of this kind is not necessary. Employers must provide some means for an exchange of viewpoints and for the satisfactory adjustment of grievances. Such a plan should be founded on simplicity and justice. Employes should be encouraged to present even the slightest grievances, as failure to adjust these might cause dissatisfaction, while a fair adjustment exemplifies the employer's attitude and encourages loyalty.

The labor shortage and the cost of training new men demand that the employer make special efforts to attract and hold the best kind of employes. Good men are attracted by various conditions, among which are the following: permanency of the work, wages, working and living conditions, treatment, recreation and schools. When these conditions are not satisfactory men will change employment, and this makes it difficult for industries located in small communities to compete with those in the larger cities, which as a rule get the choice of the men. However, the wise employer in the small community is able to adjust his conditions and retain a fair percentage of efficient and satisfied employes.

Proper recognition is given by the average employer toward maintaining satisfactory routine conditions of employment; but should he not go further and instill a personality, a spirit, into his organization—a progressive, kind, yet firm, spirit—the spirit of a square deal and good fellowship? An organization with fair, definite and strict policies,

* Courtesy American Institute of Mining and Metallurgical Engineers.

thoroughly understood and followed, has a personality similar to that of an outstanding individual, and like such an individual enjoys a degree of success greater than the average.

The employer should impress his organization heads and bosses with the necessity of treating their men with the same consideration that they wish to receive from their respective superiors. Likewise, employes should be imbued with the feeling that their employer is sincerely interested in their welfare and that they can depend on fair treatment. It should be the duty of every boss to know his men; to address them by name, preferably their given name; to take a kindly interested in their welfare and that they may grievances; and in general to be their chosen leader.

The method of employment should favorably impress men applying for work. Likewise patience and courtesy should be used when employes leave the service.

Bosses in large organizations are the intermediaries between the employer and the employe. To all intents and purposes they are the employers, and therefore they should be selected and trained with great care, for they must carry out the policies of the employer, as well as organize, plan, and direct the work. This policy, commonly called "personal touch," is of great value to any organization and it should be followed by every member from the highest official down to the assistant boss. The conscientious application of this policy will often obviate the necessity for employe representation or other committee plans. Where such plans have been established this practice will be of great assistance.

Favorable community spirit has an important bearing on the relations between employer and employe, and it should be the aim of the employer to foster such a spirit. Department heads and bosses should acquaint their wives with the policy of the employer in this regard and endeavor to obtain their enthusiastic cooperation. The support of the merchants of industrial communities is of equal importance toward this end. The average employer will also improve his methods, costs and labor conditions by the adoption of a carefully planned contract, bonus, or piece-work system; a system whereby good men receive a premium for results in excess of a fair shift's work, and where inexperienced and mediocre men have a real incentive to improve themselves. The policy of paying the same wage to the same class of labor, irrespective of ability or results accomplished, is not sound; neither is it progressive. Most employers have experimented with some premium system, but usually to a limited extent and with indifferent or unfavorable results. The principle of such a system is nevertheless correct. Most failures can be traced to inaccurate estimating with subsequent reduction of the rate when the employe made more than was expected. This results in loss of the confidence of the employe and is fatal to the success of the system, which requires the confidence of both employer and employe, and should benefit both parties.

The extent to which such a system is applicable is surprising, even on operating and repair work of a non-uniform nature. It should not be started, however, until accurate data are available on unit costs. The best results are obtained by placing the work on an individual basis, as group bonus or contract tends to remove the individual incentive. The system will disclose weak links in the chain of operations, and will tend toward a better co-ordination of the work.

Satisfactory industrial relations should contribute more than any other cause to community and industrial happiness. They are the only positive and permanent insurance for industrial peace. They will obviate the necessity for labor unions; they should encourage conservatism in local government, and collectively they should improve the national political situation; and they should increase profits to the owners, since it is true that happy and contented employes are the most permanent and efficient.

The varied conditions of employment make it impossible to formulate definite rules for the maintenance of satisfactory relations between employer and employe, as such rules depend largely on the permanency, character and location of the work; the number and intelligence of the employes; and the personality, character, and ability of the organization heads and bosses. However, there are a few fundamental principles which apply to industry in general.

Employers aim for a high degree of efficiency and loyalty. The employe wants permanent employment at fair wages, with opportunity for promotion. He also desires the opportunity to earn more than the regular wage when his results exceed a fair day's work. He requires safe and sanitary working conditions. He expects and is entitled to be treated with kindness and justice.

The employer must realize that his employes are essential to his success; that he can not operate without them; that they are an important part of his life and work. He should have a genuine regard for his men and he should take pride in giving them their just dues.

Employes labor approximately one-third of their time, the remainder being used for recreation and rest. The employer should be interested in the welfare of his men and their families at all times. He should, when occasion requires, construct and rent homes to his men; under favorable conditions, it is sometimes advisable to encourage and, if necessary, assist, permanent employes to own their homes. Where houses are available at reasonable rents, the employes should provide for themselves.

Employers should use their influence to maintain reasonable costs of living. They should encourage good schools, good amusements, recreations, hospitals and churches. In general, the employer should do his duty in every way toward making his men happy and contented. In return he should demand good service and loyalty.

Many factors other than those mentioned influence relations between employer and employe, but these call for no particular comment. The "personal touch" policy and the contract, bonus, or piecework system have been emphasized for the reason that their importance is rarely appreciated, and in the belief that their consideration is justified by employers in general.

The opinions outlined in this paper are based largely on the experience of the United Verde Copper Co., with its mine and smelter employes numbering approximately 2,200. Its policies were formulated originally by Senator W. A. Clark, president of the company, whose experience in directing large operations extends over a period of sixty years.

The company has no employes' representation nor committee plans of any kind. Conditions have permitted the department heads and bosses to keep in close touch with the men, a large percentage of whom are working under the bonus system. Sincere efforts have been made to follow the policies outlined herein, and from the response of the men it is believed that these efforts have been well repaid.

United Verde Swimming Pool—Free for All—Near Jerome, Ariz.

ECONOMIC SURVEY OF THE SOUTH

Metallic And Non-Metallic Mineral Resources Of The South With Special Reference To Transportation, Markets, Labor And Power

By Dr. Henry Mace Payne
Consulting Mining Engineer

At a meeting held at the Patton Hotel, Chattanooga, Tenn., on September 29, 1922, the American Mining Congress formally organized and added to its activities a Southern Division. The object of the division was announced as "To develop closer cooperation among those engaged in the mining industry of the southern states, and to provide a medium for greater unanimity of thought and action."

A Board of Governors was elected, consisting of:

Wm. H. Lindsey, chairman, Nashville, Tenn.

E. L. Hertzog, Spartanburg, S. C.

W. F. Wheless, Raleigh, N. C.

Lee Long, Dante, Va.

Percy D. Berry, Providence, Ky.

J. B. McClary, Brown-Marx Building, Birmingham, Ala.

C. O. Bartlett, Miami, Fla.

W. S. Peebles, Cartersville, Ga.

In order to go about the work of this division in the most intelligent manner, the national organization has authorized a complete economic survey of the southern states. This work was begun on February 15th, and an actual economic survey of the southern states is well under way. In addition to the well-recognized industries, such as coal, oil, iron, copper, graphite, etc., the potentialities of aluminum, calcium arsenate, arsenical pyrites, phosphate salts from waste products, silica and feldspar, sulphur, asphalt, and road-building materials, phosphate rock, artificial graphite from sawdust, and the use of natural graphite for furnace linings should be more fully developed.

The vast mineral resources of the South covering much of the territory from Maryland to Texas have never been adequately investigated or exploited. The work that has been done is exceedingly small as compared with the possibilities of this region. The very fact that the South has a coal area five times as great as all of Europe, excluding Russia, and twice as great including Russia, is merely indicative of the other resources of this section. Here is a region which is producing 99 percent of the sulphur of this country and about 75 percent of the world's sulphur output. The South is producing nearly 60 percent of the oil output of the United States and it is estimated to hold more than half of the oil reserves of the country. But these outstanding interests are only indicative of the other resources which to some extent have been developed in part but which to a very large extent lie dormant awaiting the magic touch of the engineer's skill and the capital needed to turn latent resources into wealth and employment creating actualities.

The total annual value of coal production in the States represented in the Southern Division is $224,250,000. The total annual value of oil production in this area is $136,000,000. And the total annual value of its other minerals is but $30,162,493. And yet the potential value of these minerals is enormous. Many mining operators in the South have never awakened to the possibility of utilizing their great low-grade ore bodies by applying the efficiency methods analogous to the great porphyry coppers of the West.

The widely diversified and disseminated deposits of graphite, phosphate, manganese, barytes, pyrites, and other minerals in the southern states call for collective thought and cooperative action.

It is a well-known fact that the South always has been handicapped because of insufficient cheap power and transportation, which have curtailed the development of both mineral and manufacturing industries.

One of the first essentials for the upbuilding of new and the extension of old industries is equitable freight rates. The principal transportation problems lie in the adjustment of freight rates on raw materials and in the locations of manufacturing industries closer to the source of supply. At the present time the Interstate Commerce Commission, under Docket 15263, is making a nation-wide inquiry into rates and charges of railroads on grain and grain products. At the time this inquiry was announced the American Mining Congress, in behalf of the entire mining industry, filed a letter with the chairman of the Commission questioning the propriety of giving any single class of shippers first claim on any reduction of rates and expressing the belief that all of the producers of basic commodities should have an equal opportunity to benefit from any rate reduction.

The position of the American Mining Congress in this matter, representing the companies interested in metal and coal mining enterprises, is based on the belief that the stimulation of the movement of basic raw materials as the result of rate reduction thereon would tend to lower the cost to the consumer of manufactured articles and finished products to increase building and construction throughout the country, to lower cost of railroad supplies, materials and equipment manufactured or derived from basic raw materials, to increase freight tonnage both actually and potentially and at the same time largely increase the earnings of the carriers.

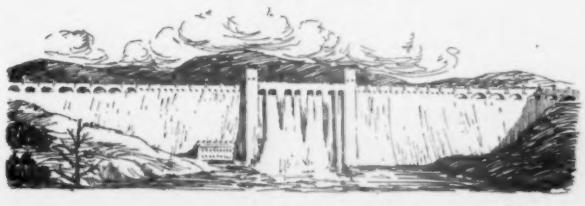
An illustration of this is the rapidly growing cast-iron pipe business, which offers a return traffic to the ore, coal and limestone carrying railroads.

In many instances a lower freight rate on basic materials will stimulate a larger business in the fabricated products, and it is contended by many that the rates should be what the competitive conditions of industry will bear rather than what the traffic will bear.

As regards motor haulage on "LCL" shipments, freight should be moved over private rights of way maintained by the railroad rather than over public highways maintained at public expense. Such an action would tend to load local freight cars to greater capacity with increased efficiency in service. Moreover, there are certain types of shipments for which the parcel post and the express are better suited to render service at less cost.

Many supposedly fixed markets exist solely because the fabricants of given industry have located for power or transportation reasons rather than near the source of the raw materials.

Much of the pottery ware of East Liverpool is made from western Kentucky and Tennessee clay. Given a scientific adjustment of state taxes and of freight rates, there is no reason why the same grade of pottery should not be manufactured in the South at or near the source of supply and another productive industry added to these states with new markets ac-



cessible under competitive freight rates.

The outstanding power problem of the South today is the hydroelectrical development of various streams, not alone Muscle Shoals, but the great rivers of Kentucky, east Tennessee and North Carolina, and even the lesser streams of Mississippi offer a valuable aggregation of "white coal" sufficient to run the total industries of every state south of the Ohio and the Potomac and east of the Mississippi River at a development not obtainable within the present century.

In general, the labor situation in the South is much better than in many other portions of the country. Nevertheless the same spirit of unrest which is being insiduously instilled in many industrial centers is found permeating large bodies of labor in the South.

It is the opinion of the American Mining Congress that we should have selective immigration; that we should lay down the principle that there is no greater privilege in the world than that of American citizenship; that any man who comes must consider it as a special privilege and must bring with him some qualification to justify his admission. Such a selective law should provide for examination at the point of embarkation. That country which refuses to grant such examination should be refused admission for its citizens.

It is of vital interest to the welfare of the country that action be taken at an early date. Whether this law should be based on the census of 1890 or on the percentage of national naturalizations is of less importance than that such a law be enacted without delay.

In the campaign now under way under the auspices of the Southern Division, a general effort is being made by the American Mining Congress to summarize in practical form the mineral industries of the South and to indicate as clearly as may be what factors can be most helpful in building up existing industries and developing new ones, and at the same time by public addresses and conferences assist in an intelligent solution of freight rates, power and similar problems, and to awaken in the minds of the leaders of industry a keen appreciation of the necessity for a vital and active consideration of the immigration problem.

This work is being carried on with the cooperation of Mr. William H. Lindsey, Nashville, Tenn., who is General Chairman of the Southern Division, and of the various state chairmen in their respective states.

The American Mining Congress seeks the cooperation of all those interested in the development of the South.

NEW RULINGS ON DEPLETION DIVIDENDS

THE Revenue Bureau amended Articles 1546 and 1549 concerning distributions from depletion or depreciation reserves to read as follows:

"Art. 1546. Distribution from depletion or depreciation reserves.—A reserve set up out of gross income by a corporation and maintained for the purpose of making good any loss of capital assets on account of depletion or depreciation is not a part of surplus out of which ordinary dividends may be paid. A distribution made from a depletion or depreciation reserve based upon the cost of the property will not be considered as having been paid out of earnings or profits, but the amount thereof shall be applied against and reduce the cost, or other basis, of the stock upon which declared for the purpose of determining the gain or loss from the subsequent sale of the stock. A distribution made from that portion of a depletion reserve based upon a valuation as of March 1, 1913, which is in excess of the depletion reserve based upon cost, will not be considered as having been paid out of earnings or profits, but the distributee shall not be allowed as a deduction from gross income any loss sustained from the sale or other disposition of his stock or shares unless, and then only to the extent that, the basis provided in section 202 exceeds the sum of (1) the amount realized from the sale or other disposition of such stock or shares, and (2) the aggregate amount of such distributions received by him thereon. No distribution, however, can be made from such a reserve until all the earnings or profits of the corporations have first been distributed. Dividends declared out of a depletion reserve based upon discovery value to the extent that such reserve represents the excess of the discovery value over cost or March 1, 1913 value, are, when received by the stockholders, taxable as ordinary dividends."

"Art. 1549. Distribution from depletion or depreciation reserve.—A reserve set up out of gross income by a corporation and maintained for the purpose of making good any loss of capital assets on account of depletion or depreciation is not a part of its surplus out of which ordinary dividends may be paid. A distribution made from such a reserve will be considered a liquidating dividend and will constitute income to a stockholder to the extent that the amount so received is in excess of the cost of his shares of stock. If such stock were acquired prior to March 1, 1913, and the fair market value as of such date was greater than the cost thereof, and less than the amount received, the income which is taxable is the excess over such market value of the amount received, but no gain is recognized if the amount received is more than the cost but less than the fair market value of the stock on March 1, 1913. No distribution, however, will be deemed to have been made from such a reserve except to the extent that the amount paid exceeds the surplus and undivided profits of the corporation. In general, any distribution made by the corporation other than out of earnings or profits accumulated since February 28, 1913, is to be regarded as a return to the stockholder of part of the capital represented by his shares of stock, and upon a subsequent sale of such stock his gain will be the excess of the selling price over the cost of the stock after applying on such cost the amount of such capital distribution. However, if such shares were acquired prior to March 1, 1913, and the fair market value as of such date was greater than the cost thereof after applying on such cost and value the amount of any such capital distribution, and was less than the sum received in distribution, the amount which is taxable is the excess over such value of the sum received in distribution. But no gain is recognized if the amount received is more than the cost but less than the fair market value of the stock on March 1, 1913, after the amount of any such capital distribution is applied to such cost and value. Dividends declared out of a depletion reserve based upon discovery value to the extent that such reserve represents the excess of the discovery value over cost of March 1, 1913, value, are, when received by the stockholders, taxable as ordinary dividends."

Formerly in England the sovereign was worth exactly a pound of silver. This gave rise to the term "pound sterling." Originally, 240 silver pennies were the equivalent of a pound. This gave rise to the term "pennyweight," which is 240th of a troy pound. The terms "pound sterling" and "pennyweight" are retained, but the sovereign is no longer worth a pound of silver and the penny weight has now no connection with the weight of a penny.

THE STATUS OF COAL LEGISLATION

A NUMBER of circumstances have contributed to inaction by Congress on coal legislation. When the coal commission was created it was expected its recommendations would be the basis for legislation. The commission failed, however, to submit in concrete form any legislative proposals, and Congressmen have been disinclined to wade through the commission's voluminous reports for the purpose of drafting legislation. In fact, the reports have not been available for this purpose. The commission issued its reports in mimeograph form and Congress has not seen fit to print them, owing to their great length, although Senator Oddie (Republican, Nevada), to whose committee on mines and mining the reports were submitted, has introduced a bill for their publication. Then, too, the investigation of the naval oil reserve leases has crowded out consideration of coal and practically every other class of legislation in the Senate, while the tax bill engaged the attention of the House, and will be followed by other legislation which has been perfected in committee. None of the committees to which coal legislation has been referred has considered the matter at this session, although Senator Oddie favors consideration of coal matters by his proposed department of mines.

Wage Agreements Defer Legislation

Negotiation of the three-year wage agreement in the bituminous industry dating from April 1, 1924, and continuance of the wage agreement in the anthracite industry until September 1, 1925, are believed to have gone a long way toward delaying action by Congress on coal. It is believed that the assurances of a continued supply of coal for the next three years has been an important factor in convincing Congress that the coal industry can work out the problem.

None of the bills now pending carry out the recommendations of President Coolidge, who in his message suggested amendment of rules governing car supply, encouragement of greater unity of ownership and common selling agents for limited districts under regulation.

Pending Bills

S. 2208. Introduced by Senator Borah (Rep., Idaho). Regulating interstate and foreign commerce in anthracite coal, and for other purposes.

S. 1945. Introduced by Senator Norris (Rep., Nebr.). Providing for the purchase of mines to supply fuel for railroads to be operated by the government.

H. R. 757. Introduced by Representative Treadway (Rep., Mass.). Regulating interstate and foreign commerce in anthracite coal, providing for standards of quality, control of distribution, and for other purposes.

H. R. 5263. Introduced by Representative Treadway (Rep., Mass.). Authorizing the President to declare a national emergency in case of stoppage or threatened stoppage of a steady supply of coal and to take over and operate mines during such emergency, and for other purposes.

H. R. 4134. Introduced by Representative Newton (Rep., Minn.). Promoting the general welfare by gathering information respecting ownership, production, distribution, cost, sale and profit in the coal industry, and to declare coal and its production and distribution charged with a public interest and use.

H. R. 698. Introduced by Representative Luce (Rep., Mass.). Relating to the quality of domestic anthracite coal.

H. R. 418. Introduced by Representative Rogers (Rep., Mass.). Declaring an embargo on anthracite coal.

H. R. 15. Introduced by Representative Rogers (Rep., Mass.). Authorizing President to declare an embargo on coal.

These bills have been referred to the Committees on Interstate and Foreign Commerce of the House and Senate.

The membership of the committees before which this legislations is pending is as follows:

Senate Committee on Interstate Commerce

Smith (chairman), Dem., S. C.	Fess, Rep., Ohio
Cummins, Rep., Iowa	Howell, Rep., Nebr.
La Follette, Rep., Wis.	Underwood, Dem., Ala.
McLean, Rep., Conn.	Pittman, Dem., Nev.
Watson, Rep., Ind.	Bruce, Dem., Md.
Fernald, Rep., Maine	Dill, Dem., Wash.
Elkins, Rep., W. Va.	Wheeler, Dem., Mont.
Gooding, Rep., Idaho	Mayfield, Dem., Tex.
Couzens, Rep., Mich.	

House Committee on Interstate Commerce

Winslow (chairman), Rep., Mass.	Burtness, Rep., N. D.
Parker, Rep., N. Y.	Barkley, Dem., Ky.
Cooper, Rep., Ohio	Rayburn, Dem., Tex.
Denison, Rep., Ill.	Huddleston, Dem., Ala.
Sanders, Rep., Ind.	Lea, Dem., Calif.
Merritt, Rep., Conn.	Hawes, Dem., Mo.
Mapes, Rep., Mich.	Parks, Dem., Ark.
Graham, Rep., Ill.	Crossner, Dem., Ohio
Newton, Rep., Minn.	Shallenberger, Dem., Nebr.
Hoch, Rep., Kans.	Corning, Dem., N. Y.
Wyant, Rep., Pa.	

Recent comments on the coal situation are as follows:

Herbert Hoover, Secretary of Commerce—"It is far better for the industry to cure its own ills than for the government to attempt it."

James J. Davis, Secretary of Labor—"The American mining industry should be competent to solve its problems."

Senator William E. Borah (Rep., Idaho)—"The coal situation is very serious and one with which Congress ought to deal."

Senator George Wharton Pepper (Rep., Pa.)—"The courts cannot solve the coal problem. Compulsory arbitration and legislative price fixing will not solve it."

Senator David A. Reed (Rep., Pa.)—"If it is advisable to nationalize the coal industry, Congress should also control the production of steel, copper, lead, zinc, the railroads, telegraph and telephone companies and the farms."

Representative **John M. Robsion** (Rep., Ky.)—"In undertaking any paternalistic legislation I think our government is taking the longest step toward radicalism that has ever been taken in peace time. I am unwilling to overthrow the great principles upon which this republic was built and enter upon a career of sovietism and paternalism."

Representative **John W. Langley** (Rep., Ky.)—"What our coal business needs is not inquisitorial laws to collect nonessential data, but laws that shorten and cheapen transportation."

Representative **Allen T. Treadway** (Rep., Mass.)—"If the operation of railroads, telephones, water companies and banks are regulated by federal or state authorities a much stronger case can be made for the regulation of those engaged in operating coal mines and selling the products."

Representative **Thomas L. Blanton** (Dem., Tex.)—"I favor regulation of coal by the Interstate Commerce Commission."

LEGISLATIVE REVIEW

Oil Lease Investigation Overshadows National Legislation—Tax Revision Bill Headed For Enactment—Immigration Restriction And Muscle Shoals Lease Ready For Action—Blue Sky Bill Being Railroaded Through House—Adjournment In Sight In June

NATIONAL legislation in Congress has been in eclipse on account of sensational revelations in the leasing of naval oil reserves. The Senate has been so distracted over the oil situation that general legislation has received little consideration. One day its committee on public lands unearths some new scandal and the day following senators proceed to elaborate on the disclosure. In fact, the atmosphere around the Senate has become so saturated with oil as to subject that staid body to an explosion should anyone be bold enough to strike a light. The disclosures have hit members of both parties, wrecked some presidential aspirations and caused a break in the Cabinet. Conservative congressmen hope, however, that out of the unpleasant situation will arise a deeper respect for public office and its obligations.

The days of Grover Cleveland were vividly recalled by elder statesmen when President Coolidge defied the Senate in refusing to comply with its request to oust Secretary of the Navy Denby for having approved the naval oil reserve leases. It was the first chance the President had to display his grit and that his course meets with general public approval is indicated by expressions reaching Washington. The President took the fundamental position that no man should be punished without a hearing. Selection of lawyers to prosecute the leases was delayed by objection to those picked by the President. Former Attorney General Gregory and Silas H. Strawn, the original appointees, were dropped and former Senator Atlee Pomerene, of Ohio, and Owen J. Roberts, of Philadelphia, finally selected. The case promises to be before the courts for some time, and in the meantime the Senate public lands committee is investigating new leads in the case, which appear to have no end. Congress passed a resolution directing cancellation of the leases and the House passed a bill providing a special fund of $100,000 for action thereunder.

Other phases of the oil industry are also the subject of pending or prospective congressional consideration. During a debate in the House, Representative Blanton, Democrat of Texas, favored regulation of oil and coal prices by the Interstate Commerce Commission. Senator La Follette, Republican of Wisconsin, announced he intended to introduce a bill concerning oil prices. Repeal of a law passed last session authorizing permits and leases to lands in the Red River region of Oklahoma was proposed by Senator Fletcher, Democrat of Florida, on the ground that the rights of claimants thereon had been determined by the Supreme Court in its decision in this case. He produced a letter from the Department of Justice to President Harding opposing approval of this bill. He explained that as the bill was passed during the end of the Congress last March President Harding may not have had time to consider the objection.

Another class of legislation directed against the oil industry is that pertaining to the pollution of streams by oil. The Senate passed a bill to forbid the discharge of oil into coastal navigable waters, and other bills have been introduced to forbid the discharge of oil into rivers from oil wells, pipe lines, terminals, refineries, tanks, or from storage places. The House committee on rivers and harbors in its consideration of these matters has indicated that it will confine itself to legislation regarding the discharge of oil in coastal waters and not cover drainage from mines, which is involved in some of the bills.

Reporting on its investigation during the last year the Senate Gold and Silver Commission presented a review of the present situation of the mining industry.

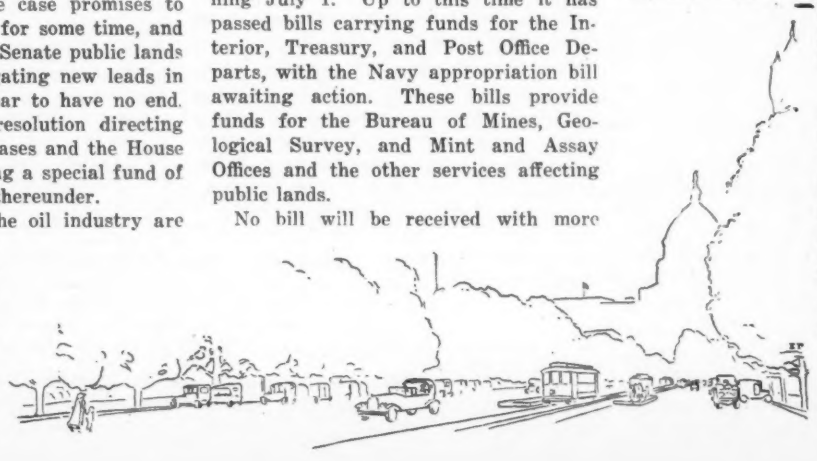
The main attention of the House has been given to bills making appropriations for the government service beginning July 1. Up to this time it has passed bills carrying funds for the Interior, Treasury, and Post Office Departs, with the Navy appropriation bill awaiting action. These bills provide funds for the Bureau of Mines, Geological Survey, and Mint and Assay Offices and the other services affecting public lands.

No bill will be received with more pleasure by the average individual and the business world than the tax revision bill which is now before the House. This bill, generally known as the Mellon bill, provides material tax reduction.

The Ford offer to lease the Muscle Shoals project is again before Congress. The House committee on military affairs has recommended that it be accepted. A group of members of the committee headed by Representative Hull, Republican of Iowa, has opposed this action and favors the offer of various southern power companies. One of the late offers to lease this property came from the Union Carbide Company, of New York. A vote on the matter is expected after conclusion of consideration of the tax bill by the House probably early in March.

With only four months remaining before the present law expires, advocates of immigration restriction are seeking opportunity to have enacted the Johnson 2 percent restriction bill.

Coal legislation slumbers in committee. Although several bills have been introduced designed to regulate the coal industry, no attempt has been made to press their consideration. The latest coal measure to appear was one drafted by Governor Pinchot, of Pennsylvania, which seeks to regulate the anthracite industry. Some difficulty was experienced by the Governor in having it presented in the proper light. Senator Pepper, of Pennsylvania, declined a request of the Governor that he introduce the measure, and as Senator Reed, also of Pennsylvania, does not look with favor upon coal legislation, the Pinchot bill appears under a guardian, it having been introduced by Senator Borah, of Idaho.



Without hearing or extended committee consideration, the Denison blue sky bill has been favorably reported to the House by the Interstate Commerce Committee and may be acted on by that body at any time.

The congressional leaders are hopeful of clearing the legislative slate so as

IMPORTANT BILLS REVIEWED IN THIS ISSUE

MINING—
H. J. Res. 142: Brumm (R.), Pa. Mine Assessment.
H. R. 4: Denison (R.), Ill. Blue Sky.
S. 2166: Oddie (R.), Nev. Helium.
H. R. 3852: North Carolina Leases.
H. R. 5078: Harris (D.), Ga. Arsenic Ores.
S. J. Res. 60: Harris (D.), Ga. Calcium Arsenate.
H. R. 6361: Hudspeth (D.), Tex. Potash Survey.

COAL—
S. 2208: Borah (R.), Idaho. Anthracite Regulation.
H. R. 6713: Sinnott (R.), Oreg. Coal Trespass.

OIL—
S. 2414: Ransdell (D.), La. Pollution Regulation.
S. 2132: Fletcher (D.), Fla. Red River Lands.
S. 2314: Harreld (R.), Okla. Indian Leases.
S. J. Res. 54: Enacted—Lease Cancellation.
H. R. 6886: Rosenbloom (R.), W. Va. Oil Duty.

TAXATION—
H. R. 6715: Green (R.), Iowa. Revenue Revision.
H. R. 5733: Keller (R.), Minn. Mine Tax.
H. J. Res. 1: Defeated—Security Tax.

IMMIGRATION—
H. R. 6540: Johnson (R.), Wash. Restriction Bill.

TARIFF—
S. 2435: Fletcher (D.), Fla. Duty Reduction.
S. 2483: Gooding (R.), Idaho. Wire Rods.

LABOR—
H. Res. 176: Zihlman (R.), Md. Convict Labor.
H. J. Res. 155: Rogers (D.), N. H. Child Labor.

COINAGE—
H. R. 7040: Wolff (D.), Mo. 2½c. Pieces.

TRANSPORTATION—
S. 2224: Cummins (R.), Iowa. Rail Consolidation.
H. J. Res. 141: Hoch (R.), Kans. Rate Inquiry.

MISCELLANEOUS—
H. R. 518: McKenzie (R.), Ill. Muscle Shoals.
H. R. 6782: Cramton (R.), Mich. Uniform Contracts.

to permit of adjournment in June, as this is a presidential election year.

MINING

Gold and Silver Commission

Senate Report by Mr. Oddie (Rep., Nev.) From the commission on gold and silver inquiry. This is an extended report on the investigations which have been conducted by the commission, and is more fully reviewed in a separate article in this issue.

Mine Assessment

H. J. Res. 142. Introduced by Mr. Brumm (Rep., Pa.). Referred to the committee on mines and mining. It proposes to suspend for three years beginning July 1, 1923, the requirement of annual assessment work on mining claims located on discovery of carnotite or other radium-bearing ore. It requires holders of such claims to file notice in the local land office before July 1, 1924, of their intention to avail themselves of this privilege.

Blue Sky

H. R. 4. Introduced by Mr. Denison (Rep., Ill.). Reported by the committee on interstate commerce (H. Rep. 132). This is the proposed federal blue sky law. It was reviewed in the January, 1924, Mining Congress Journal. The committee gave no hearings on the measure in advance of reporting it to the House on the assumption that as hearings had been given in the last Congress and the bill had passed the House in that Congress, it was unnecessary to give any further extended committee consideration. In his report on the bill Mr. Denison refers particularly to mining as follows:

"If an oil well is brought in in some distant part of the country, or a new mine is developed in some out-of-the-way place, these pirates of promotion flock to the scene and overnight organize their get-rich-quick corporations and flood the mails with lurid literature promising fabulous returns."

He said that stock-selling oil companies in Oklahoma produced less than two one-thousandths of 1 percent of oil produced in Oklahoma in 1917 and that for every $555 of capital only $1 worth of oil was produced.

H. R. 6139. Introduced by Mr. Christopherson (Rep., S. D.). Referred to the committee on judiciary. It proposes to regulate the issuance of securities by corporations under the Federal Trade Commission.

H. R. 5793. Introduced by Mr. Gibson (Rep., Vt.). Referred to the committee on the District of Columbia. It amends the laws of the District concerning mining, manufacturing and other corporations operating therein. It provides for at least three directors of such companies but no requirement as to citizenship or residence. The corporations are required to make annual reports as to their stock, debts, etc. It also permits corporations to purchase stock or property of any other corporation.

S. J. Res. 74. Introduced by Mr. Frazier (Rep., N. D.). It would require congressmen and government employes receiving $3,000 or more salary to report to the Federal Trade Commission the amount of stock, bonds or other investments owned by them within the past ten years in any mining, oil, or other corporation. The resolution is based on the fact that legislation before Congress affecting mining and oil development may conflict with such investments and that government employes or public officials should not be influenced in their attitude thereon by considerations of personal gain.

H. J. Res. 179. Introduced by Mr. Wefald (Rep., Minn.). Referred to the committee on judiciary. This is similar to the foregoing.

Helium Production

S. 2166. Introduced by Mr. Oddie (Rep., Nev.). Referred to the committee on mines and mining. This bill places under the Bureau of Mines the operation of helium production plants in a general plan by which the Interior Department would conserve, produce and exploit helium gas for national defense and commercial aeronautical purposes. The bill authorizes the Department to acquire, by purchase or lease, necessary helium land and to explore for, procure or conserve helium-bearing gas, and to construct

plants for its production, storage and repurification.

H. R. 5722. Introduced by Mr. Kahn (Rep., Cal.). Referred to the committee on military affairs. This is similar to the foregoing.

Indian Lands

S. 2315. Introduced by Mr. Harreld (Rep., Okla.). Reported by the committee on Indian affairs. It provides that any right or interest in lands or minerals in the Osage Indian Reservation in Oklahoma held by other than Indians shall be subject to sale, assignment and transfer under rules of the Interior Department.

H. R. 6843. Introduced by Mr. Howard (Dem., Okla.). Reported by the committee on Indian affairs. This is similar to the foregoing.

H. R. 3852. Passed by the House. It authorizes 25-year leases for oil, gas, coal and other minerals on lands of the Cherokee Indians in North Carolina.

Calcium Arsenate

H. R. 5078 (amendment). Introduced by Mr. Harris (Dem., Ga.), in the Senate. It proposes to make available $25,000 for examination by the Geological Survey of arsenic-bearing ores.

S. J. Res. 60. Introduced by Mr. Harris (Dem., Ga.). Reported by the committee on agriculture. It proposes to appropriate $10,000,000 for the purchase and sale by the government of calcium arsenate and nitrate of soda.

S. 2250. Amendment introduced by Mr. Harris (Dem., Ga.). It proposes to appropriate $10,000,000 for the purchase and sale by the government of calcium arsenate and nitrate of soda.

S. Doc. 27. Report of the Interior Department on arsenic deposits in the United States. The report was prepared by the Geological Survey and refers to deposits in the eastern states, South Dakota, Colorado, Utah, Nevada, Montana, Idaho, Washington, Oregon and California.

H. R. 6361. Introduced by Mr. Hudspeth (Dem., Tex.). Referred to the committee on agriculture. This proposes to appropriate $1,000,000 each for five years for investigations by the Geological Survey to determine the location and extent of potash deposits in the United States.

COAL

Anthracite Regulation

S. 2208. Introduced by Mr. Borah (Rep., Idaho). Referred to the committee on interstate commerce. This bill, prepared by Governor Pinchot of Pennsylvania, proposes to regulate the anthracite coal industry. It seeks to charge this industry with a public interest, subject to regulation by Congress. It proposes to prohibit certain defined practices, which are declared to be unlawful, including unfair discrimination, unreasonable prices, the giving of preferences or advantages, and conspiracy, combination or agreement to monopolize, manipulate or control prices. The bill creates within the Interstate Commerce Commission a coal division of three members at an annual salary of $10,000 each. This division is to investigate conditions and study problems in the industry, including ownership of mines, royalties, costs of production and distribution, wages, conditions of labor, causes of strikes, and waste of anthracite. The bill gives the division authority to require periodic reports from those engaged in the anthracite industry, and also power to prescribe accounting systems in the industry. It is also authorized to prescribe standards of weight, size and purity of anthracite and to require those engaged in commerce in anthracite to secure licenses.

Powers are given the division to handle the coal situation in national emergencies similar to those conferred by the Lever law during the war.

Coal Lands

H. R. 6713. Introduced by Mr. Sinnott (Rep., Oreg.). Referred to committee on public lands. It defines trespass on coal lands of the United States as follows:

"That it shall be unlawful to mine and remove coal of any character, whether anthracite, bituminous, or lignite, from beds or deposits in land of the United States, or in deposits or beds reserved to the United States, within the intent to appropriate, sell, or dispose of the same, and every person who shall violate any of the provisions of this act shall be deemed guilty of a misdemeanor and fined not more than $1,000 or imprisoned not more than one year, or both.

"Nothing in this act, however, shall interfere with any right or privilege conferred by existing laws of the United States."

Alaskan Lands

S. Res. 160. Introduced by Mr. La-Follette (Rep., Wis.). It calls on the Interior Department for all correspondence in connection with naval coal reserves in Alaska.

OIL

Pollution Regulation

S. 2414. Introduced by Mr. Ransdell (Dem., La.). Referred to the committee on commerce. It proposes to prohibit, under the jurisdiction of the Interior Department, the discharge of oil from any oil well, terminal, refinery, tank or place of storage into navigable rivers.

H. R. 6256. Introduced by Mr. Wilson (Dem., La.). Referred to the committee on rivers and harbors. This is similar to the foregoing.

Red River Lands

S. 2132. Introduced by Mr. Fletcher (Dem., Fla.). Referred to the committee on public lands. It proposes to repeal the law of March 4, 1923, which authorized the Interior Department to issue to persons and corporations permits to explore or lease lands south of the medial line of the main channel of Red River in Oklahoma. Senator Fletcher produced a report from the Department of Justice to the late President Harding opposing this bill, but due to the fact that it passed Congress during the closing days of the last session apparently it escaped the late President's attention in the rush of passing on many bills approved by Congress at that time. The opinion of the Department of Justice was to the effect that the claimants to these lands had lost their cases in the recent litigation before the Supreme Court.

Gasoline Tax

H. R. 655. Passed by the House. It proposes a tax of 2 cents per gallon on gasoline sold in the District of Columbia.

Indian Oil Leases

S. 2314. Introduced by Mr. Harreld (Rep., Okla.). Referred to the committee on Indian affairs. It proposes to lease unallotted Indian lands, except those of the Osage and Five Civilized Tribes, for oil and gas, for ten years or as long thereafter as oil or gas is produced in paying quantities.

H. R. 6298. Introduced by Mr. Garber (Dem., Okla.). Referred to the committee on Indian affairs. This is similar to the foregoing.

Lease Cancellation

S. J. Res. 54. Enacted into law. This resolution declares the naval oil reserve leases in California and Wyoming to be against the public interest. Authority is given the President to conduct suits to cancel the leases and contracts thereunder granted by former Secretary of Interior Fall and Secretary of the Navy Denby to the Mammoth Oil Company and the Pan American Petroleum and Transport Company. A number of resolutions of similar character were introduced in both the Senate and House.

H. J. Res. 160. Passed by the House. It appropriates $100,000 to be expended under the direction of the President for the prosecution of suits to cancel naval oil reserve leases. The President appointed Owen J. Roberts, of Philadelphia, and former Senator Atlee Pomerene, of Ohio, to conduct these suits, growing out of charges of fraud in connection with leases of naval oil reserves in California and Wyoming.

S. J. Res. 71. Introduced by Mr. Walsh (Dem., Mont.). Passed by the Senate

and House. This proposes that the Interior Department shall begin suit to obtain title for the United States to certain oil lands in California leased to the Standard Oil Company of California other than those covered in the foregoing resolution, and to prevent the extraction of oil therefrom.

Oil Duty

H. R. 6886. Introduced by Mr. Rosenbloom (Rep., W. Va.). Referred to the committee on ways and means. This proposes to place an import duty of 35 cents per barrel on crude petroleum and 25 cents per barrel on fuel oil.

Foreign Oil

S. Res. 149 and 150. Introduced by Mr. Dill (Dem., Wash.). Passed by the Senate. These resolutions call on the State Department for correspondence regarding oil concessions for Americans in foreign countries.

TAXATION

Revenue Revision

H. R. 6715. Introduced by Representative Green (Rep., Iowa). Reported by the committee on ways and means and now being considered by the House. This is known as the Revenue Act of 1924, and proposes to reduce taxes and revise the administrative provisions of the internal revenue laws to date. It fixes 12½ percent as the basis for determining both capital gain and loss. In the case of mines, oil and gas wells, discovered by the taxpayer after February 28, 1913, and not acquired as the result of purchase of a proved tract or lease, where the fair market value of the property is materially disproportionate to the cost, the basis for depletion shall be the fair market value of the property at the date of discovery or within thirty days thereafter; but such depletion allowance based on discovery value shall not exceed 50 percentum of the net income (computed without allowance for depletion) from the property upon which the discovery was made, except that in no case shall the depletion allowance be less than it would be if computed without reference to this provision.

The committee recommended surtax rates of from 1 percent on incomes between $10,000 and $12,000 up to 25 percent on incomes in excess of $100,000. The House, however, adopted the surtax rates proposed by the Democrats, headed by Representative Garner, of Texas, ranging from 1 percent on incomes between $12,000 and $14,000 up to 44 percent on incomes exceeding $92,000. Normal income tax rates were fixed by the House at 2 percent on incomes up to $5,000; 4 percent on incomes up to $8,000, and 6 percent on incomes of more than $8,000, in place of the higher rates recommended by the committee. The detailed surtax rates as adopted by the House are as follows:

One percent on incomes between $12,000 and $14,000; with an increase of 1 percent for each $2,000 up to 25 percent on incomes between $60,000 and $61,000; with increases of 1 percent each on each $1,000 of income up to 30 percent on incomes between $65,000 and $66,000; 1 percent each on each $2,000 additional

WHERE AND THE HELL DID THEY GET THAT?
Investigation of Teapot Dome Lease
Investigation of Naval Oil Reserves
Investigation of Sinclair Lease
Investigation of Sugar Trust
Investigation of Naval Oil Reserves
Investigation of Sugar Trust
Investigation of Bureau of Printing
Investigation of Shipping Board
Investigation of Shipping Board
Investigation of Shipping Board
—Los Angeles Times

Just the Presidential Year Log Rolling

beginning at 31 percent on incomes between $66,000 and $68,000 up to 43 percent on incomes between $90,000 and $92,000, and 44 percent on more than $92,000.

In the case of a bona fide sale of mines, oil or gas wells, or any interest therein, where the principal value of the property has been demonstrated by prospecting or exploration and discovery work done by the taxpayer, the portion of the tax under the surtax schedule attributable to such sale as voted by the House will not exceed 16 percent of the selling price of such property or interest.

The House rejected an amendment proposed by Representative Frear (Rep., Wis.) fixing surtax rates at from 1 percent on incomes between $6,000 and $10,000 up to 50 percent on incomes of more than $200,000.

The House also rejected an amendment by Representative Madden (Rep., Ill.) fixing the surtax rates at from 1 percent on incomes between $10,000 and $12,000 up to 26 percent in excess of $100,000.

An amendment by Representative Garner providing that stock dividends shall to the extent of their fair market value be taxed to the distributee in the same manner as a dividend paid in money was defeated.

Discovery Clause

Representative Lozier (Dem., Mo.) sought to limit the depletion allowance in the case of discovery of oil and gas wells. His amendment, which was defeated, provided that the depletion allowance as to oil and gas wells or their production shall apply only to a discovery well in a new field that produced oil or gas in such commercial quantities as to return the capital outlay with a profit, and that such well shall be at least five miles from any other commercial producing oil or gas well. He charged that under the discovery clause oil producers are evading taxes amounting to $290,000,000 per year. He said the discovery clause was proper for those developing a new field, but that the Treasury had perverted the provision so as to limit each discovery to 160 acres and adjoining land owners obtained the same depletion privileges as those who really discovered a field.

Representative Green said Congress could not put all oil discoveries on the same footing and desired to know how new territory could be defined. Mr. Lozier said Congress could determine what is a discovery well and limit the term to the first producing well in each new field. He alleged that thousands are being allowed the benefit of the discovery clause.

Representative Garner, in opposing the amendment, said that when the committee reduced the depletion allowance for discovery to 50 percent it had done all that ought to be done in that connection. Mr. Lozier said the allowance should be cut 90 percent.

The bill as reported by the committee provides for deductions for depletion to individuals and corporations as follows: "In the case of mines, oil and gas wells, other natural deposits, and timber, a reasonable allowance for depletion and for depreciation of improvements, according to the peculiar conditions in each case; such reasonable allowance in all cases to be made under rules and regulations to be prescribed by the commissioner, with the approval of the secretary. In the case of leases the deduction allowed shall be equitably apportioned between the lessor and lessee." The normal tax on corporations is fixed at 12½ percent.

The estate taxes range from 1 percent on estates of $50,000 up to 25 percent on estates of $10,000,000 or more.

The bill creates a board of tax appeals of not less than seven or more than twenty-eight members to be determined by the President.

Progressives' Tax Proposals

H. R. 6715. Amendment by Representative Frear (Rep., Wis.). It provides that in the case of a bona fide sale of mines, oil or gas wells or any interest therein, where the principal value of the property has been demonstrated by

prospecting or exploration and discovery work done by the taxpayer, the portion of the tax imposed by this section (surtax rates) attributable to such sale shall not exceed, for the calendar year 1921, 20 percent, and for each calendar year thereafter 16 percent of the selling price of such property or interest.

Mine Taxes

H. R. 5733. Introduced by Mr. Keller (Rep., Minn.). Referred to the committee on ways and means. It proposes to tax the privilege of the use and enjoyment of large land holdings, which would affect all mineral lands. Lands of a value less than $10,000 would be exempt from the tax, which is fixed at 1 percent per year.

Mr. Keller says his bill will produce an annual revenue of $1,210,000,000. He estimates the tax on anthracite and bituminous coal lands would amount to $95,000,000 per year, and that the tax on the value of oil, iron, copper, lead, zinc and other mineral resources would be $430,000,000.

H. R. 5734. Introduced by Mr. Keller (Rep., Minn.). Referred to the committee on ways and means. This proposes an estate tax of from 1 percent on estates between $20,000 and $35,000 up to 50 percent on estates exceeding $100,000,000.

H. R. 5735. Introduced by Mr. Keller (Rep., Minn.). Referred to the committee on ways and means. This proposes to draw a distinction between earned and unearned income, and reduces the present rates on earned incomes by 50 percent.

H. R. 5736. Introduced by Mr. Keller (Rep., Minn.). Referred to the committee on ways and means. It proposes to abolish the war profits and corporation income taxes.

H. R. 6715. Amendment by Mr. King (Dem., Utah) in the Senate. It proposes a graduated schedule of surtax rates, beginning at 1 percent on net incomes between $5,000 and $6,000 up to 35 percent on net incomes exceeding $175,000.

Security Tax

H. J. Res. 1. By Mr. Green (Rep., Iowa). It proposed a constitutional amendment to tax federal and state securities now exempt, but was defeated in the House by lack of a two-thirds vote.

H. J. Res. 161. Introduced by Mr. Little (Rep., Kans.). Referred to the committee on ways and means. It proposes a constitutional amendment giving Congress power to collect taxes on income derived from federal and state securities issued before or after the ratification of this amendment, when such income exceeds $12,500 per year. It also proposes to tax inheritances from 13 percent on estates between $1,000,000 and $3,000,000 up to 33 1/3 percent on estates of more than $25,000,000.

H. J. Res. 174. Introduced by Mr. Huddleston (Dem., Ala.). Referred to the committee on ways and means. It proposes a constitutional amendment to tax federal and state securities now tax exempt.

H. R. 6783. Introduced by Mr. McClintic (Dem., Okla.). Referred to the committee on ways and means. It proposes inheritance taxes of from 5 percent on estates of $50,000 up to 80 percent on estates of $10,000,000.

Refund Claims

H. R. 6201 and 6901. Introduced by Mr. Fairchild (Rep., N. Y.). Referred to the committee on ways and means. They propose to extend to April 1, 1925, the time within which a taxpayer is entitled to file a claim for refund.

H. R. 6823. Introduced by Mr. Kearns (Rep., Ohio). Referred to the committee on ways and means. It provides for deduction of losses from October 31, 1918, to January 1, 1921, on tax returns of the preceding year.

H. J. Res. 176. Introduced by Mr. Jeffers (Dem., Ala.). Referred to the committee on rules. It is an outgrowth of the oil investigation, and proposes that the income tax returns of Harry F. Sinclair, Edward L. Doheny and E. L. Doheny, Jr., and their companies from 1913 to 1922 shall be examined by a special committee of seven senators and eleven representatives.

H. J. Res. 177. Introduced by Mr. Browning (Dem., Tenn.). Referred to the committee on rules. This is similar to the foregoing.

H. J. Res. 187. Introduced by Mr. Vaile (Rep., Colo.). Referred to the committee on rules. It provides for investigation by congressional committees of income tax returns of Harry F. Sinclair and corporations controlled by him from 1916 to 1922.

IMMIGRATION

Restriction Bill

H. R. 6540. Introduced by Mr. Johnson (Rep., Wash.). Reported by the committee on immigration (H. R. 176). Minority report by Representative Sabath (Dem., Ill.). This is a substitute for H. R. 101, and is the immigration restriction bill as finally agreed upon by the committee. It is proposed to limit immigration after July 1, 1924, to 2 percent of the number of aliens living in the United States in 1890.

H. R. 6067. Introduced by Mr. Wilson (Dem., Miss.). Referred to the committee on immigration. It proposes to prohibit all immigration for six years.

H. R. 6247. Introduced by Mr. Cable (Rep., Ohio). Referred to the committee on immigration. It proposes to extend until June 30, 1930, the present law restricting immigration to 3 percent of aliens residing in the United States in 1890.

S. 2082. Introduced by Mr. Sterling (Rep., S. Dak.). Referred to the committee on immigration. It proposes to create an immigration board to regulate the immigration of aliens into the United States. The board would consist of five members at an annual salary of $10,000 each. The bill declares it to be the policy of the United States to admit annually only as many law-abiding immigrants as may be capable of being so employed as not to endanger the normal American standards of living, labor and wages, and capable of becoming assimilated to American standards.

S. 2365. Introduced by Mr. Moses (Rep., N. H.), for Mr. Watson (Rep., Ind.). Referred to the committee on immigration. It proposes to limit immigration to 2 percent of the number of foreign-born per nationality in the United States in 1910. In case of unemployment in the United States the Department of Labor would be authorized to suspend immigration.

TARIFF

Revision Bills

S. 2435. Introduced by Mr. Fletcher (Dem., Fla.). Referred to the committee on finance. It would authorize the President, in case of overproduction of any commodity in the United States, or in case of emergency abroad, to admit free of duty, commodities of foreign countries in exchange for American commodities. At least 50 percent of the American and foreign commodities must be carried in American ships in order to obtain this tariff privilege.

S. 2483. Introduced by Mr. Gooding (Rep., Idaho). Referred to the committee on finance. This proposes to repeal the duty on wire rods.

LABOR

Convict Labor

H. Res. 176. Introduced by Mr. Zihlman (Rep., Md.). Reported by the committee on labor. It calls on the Department of Labor for a report as to the kind, quality and value of articles produced by convict labor in federal and state prisons.

H. R. 6205. Introduced by Mr. Zihlman (Rep., Md.). Referred to the committee on labor. It proposes to prohibit interstate transportation of the products of convict labor, which would include the products of mines.

Child Labor

H. J. Res. 184. Introduced by Mr Foster (Rep., Ohio). Referred to the committee on judiciary. It proposes a constitutional amendment to limit, regulate and prohibit the labor of persons under 18.

H. J. Res. 155. Introduced by Mr. Rogers (Dem., N. H.). Referred to the committee on judiciary. It proposes a constitutional amendment to forbid the employment of children under 16 in any mine or factory.

H. J. Res. 173. Introduced by Mr. Wolff (Dem., Mo.). Referred to the committee on judiciary. It proposes a constitutional amendment to prohibit the labor of persons under 16, and to prescribe conditions of such labor.

COINAGE

Memorial Coins

H. R. 7040. Introduced by Mr. Wolff (Dem., Mo.). Referred to the committee on coinage, weights and measures. It authorizes the coinage of two-and-a-half-cent pieces of an alloy composed of 95 percent copper and 5 percent tin and zinc, in memory of the late Presidents Roosevelt, Harding and Wilson.

H. R. 5942. Introduced by Mr. Colton (Rep., Utah). (By request.) Referred to the committee on coinage, weights and measures. It proposes to establish the decimal system of weights and measures, and makes definitions thereof.

S. 2070. Introduced by Mr. King (Dem., Utah). Referred to the committee on commerce. This is similar to the foregoing.

TRANSPORTATION

Railroad Consolidation

S. 2224. Introduced by Mr. Cummins (Rep., Iowa). Referred to the committee on interstate commerce. This bill provides for the consolidation of railway properties and is amendatory of the consolidation provisions of the Interstate Commerce Act. It authorizes the Interstate Commerce Commission to adopt a plan of consolidation of railroads into systems. These systems shall be arranged so that the cost of transportation shall be the same between competitive systems, and enable them to employ uniform rates in competitive traffic. The bill would permit two or more railroads to consolidate by a plan of reorganization. The bill authorizes a federal railroad corporation to own and operate railroads within railroad systems.

S. 1989. Introduced by Mr. Dill (Dem., Wash.). Referred to the committee on interstate commerce. It provides that none of the requirements of the Commerce Act for a certificate of necessity for building any new railroad or extensions of existing railroads shall apply where all of the new road or extensions of an existing road are within the boundary of a state.

Rate Inquiry

H. J. Res. 141. Introduced by Mr. Hoch (Rep., Kans.). Referred to the committee on interstate commerce. It directs the Interstate Commerce Commission to thoroughly investigate the rate question for the purpose of adjusting any inequalities which may be found therein.

H. R. 5718. Introduced by Mr. Morrow (Dem., N. Mex.). (By request.) Referred to the committee on interstate commerce. This bill seeks to repeal sections 18, 19, 20 and 22 of the Transportation Act.

H. R. 6074. Introduced by Mr. Wolff (Dem., Mo.). Referred to the committee on interstate commerce. It directs the Interstate Commerce Commission to establish a system of mileage books for commercial travelers at reduced rates.

PATENTS

Government Board

S. 2387. Introduced by Mr. Ernst (Rep., Ky.). Referred to the committee on patents. It authorizes an interdepartmental patents board consisting of one representative of each of the government departments to handle patent rights owned by the government. It appropriates $25,000.

S. 2388. Introduced by Mr. Ernst (Rep., Ky.). Referred to the committee on patents. It would authorize secrecy of patents essential to national defense.

H. R. 5078. Amendment by Mr. Shipstead (Farmer-Labor, Minn.). It provides that funds of the Patent Office shall not be used for propaganda nor for the promotion of legislation intended to terrify patent attorneys from testifying before committees of Congress. It is also provided that no funds shall be available for the Patent Office until patent attorneys who have been barred from the office for criticizing the Commissioner of Patents shall be reinstated.

H. R. 5790. Introduced by Mr. Cramton (Rep., Mich.). Referred to the committee on patents. It proposes to prevent fraud, deception or improper practice in connection with business before the Patent Office. It is aimed more particularly against lawyers soliciting business before the Patent Office.

INDUSTRIAL

Muscle Shoals

H. R. 518. Introduced by Mr. McKenzie (Rep., Ill.). Reported by the committee on military affairs. This bill provides for acceptance of the offer of Henry Ford to lease Muscle Shoals. It carries an appropriation of $3,472,487 to construct a new steam power plant to generate 40,000 horse power to replace the Gorgas steam plant sold to the Alabama Power Company.

H. Rept. 143, part 2, on H. R. 518, by Representatives Hull, Iowa; Morin and Ransley, Pa.; Hill, Md.; Frothingham, Mass., and Wainwright, New York, Republicans, from the committee on military affairs. This is a minority report against the acceptance of the Ford offer to lease the Muscle Shoals, Ala., property for power development and nitrate and fertilizer production. The Representatives contend that the property should be retained by the government and developed in the interests of the country instead of being granted to a private corporation. They refer particularly to the power production possibilities and the need of affording products of these plants to southern industries. The report states that the lease offer of the various southern power companies for this project is more favorable than is the Ford offer. Reference is made to the effect that the government would have been just as justified in deeding to Benjamin Franklin the anthracite coal resources of Pennsylvania for development of his electrical experiments as it would be in turning over this property to Mr. Ford.

H. R. 6300 and 6781. Introduced by Mr. Hull (Rep., Iowa). Referred to the committee on military affairs. They propose to accept the offer of the Tennessee Electric Power Company and other southern power companies to lease the Muscle Shoals, Ala., nitrate project.

S. 2372. Introduced by Mr. Norris (Rep., Nebr.). Referred to the committee on agriculture. It proposes to create a federal chemical corporation for the manufacture of explosives for military purposes and of fertilizer for agricultural purposes.

H. R. 6069. Introduced by Mr. Fulbright (Dem., Mo.). Referred to the committee on agriculture. It provides that farm implements and fertilizers shall be marked with the name of the manufacturer and the cost of manufacture.

Uniform Contracts

H. R. 6782. Introduced by Mr. Cramton (Rep., Mich.). Referred to the committee on judiciary. It proposes the establishment of uniform government contracts for the purchase of supplies. Contracts would be standardized by the Comptroller General, who would furnish Congress information as to difference in prices under contracts for like or similar commodities.

H. R. 646. Reported by the committee on judiciary. It seeks to make valid and enforceable written provisions or agreements for arbitration of disputes arising out of contracts, maritime transactions or commerce among the states and with foreign nations.

S. J. Res. 78. Introduced by Mr. King (Dem., Utah). It proposes an international conference on world relations in

Washington to consider the matter of stimulation of production, to facilitate international trade and stabilize international exchange.

H. R. 6871. Introduced by Mr. Graham (Rep., Pa.). Referred to the committee on judiciary. It is designed to forbid bribery and other corrupt trade practices.

H. R. 6720 and H. J. Res. 178. Introduced by Mr. Wolff (Dem., Mo.). Referred to the committee on judiciary. The first bill amends existing law, and the second proposes a constitutional amendment which would class as treason the cheating or defrauding of the government during war by substitution of an inferior article, short weight or conveying to others of government property.

H. R. 7034. Introduced by Mr. Winslow (Rep., Mass.). Referred to the committee on interstate commerce. It proposes to establish in the Bureau of Foreign and Domestic Commerce of the Department of Commerce a foreign commerce service to investigate conditions affecting mining and other industries which may be of industrial interest to the United States. This service has already been established in the department but is not included under the organic law of that department.

SHIPPING

Merchant Marine

H. R. 6202. Reported by the House committee on merchant marine. It proposes to authorize a fund of $25,000,000 for the construction of vessels in private shipyards and an additional fund of $25,000,000 for installation of Diesel engines in Shipping Board vessels. The committee says this new engine is likely to make old types of coal and possibly oil vessels unprofitable.

H. R. 5948. Introduced by Mr. Edmonds, (Rep., Pa.). Referred to the committee on merchant marine. This is similar to the foregoing.

S. 2217. Introduced by Mr. Walsh, (Dem., Mass.). Referred to the committee on commerce. It proposes to abolish the Shipping Board and to transfer its activities to a newly created Bureau of Merchant Marine in the Department of Commerce.

Canal Bills

H. R. 3933. Introduced by Mr. Winslow, (Rep., Mass.). Reported by the committee on interstate commerce, (H. Rept. 181). This bill proposes to purchase the Cape Cod Canal at a cost of $11,500,000.

H. R. 6822. Introduced by Mr. Rainey, (Dem., Ill.). Referred to the committee on rivers and harbors. It proposes a nine-foot waterway from Lake Michigan at Chicago to the Mississippi river below the mouth of the Ohio river. It appropriates $5,700,000.

H. R. 5560. Introduced by Mr. Reed, (Rep., N. Y.). Referred to the committee on judiciary. It proposes to incorporate the Lakes to the Hudson Ship Canal Company for the construction of an inland waterway from the Hudson River through New York State to the Great Lakes, and development of power projects. Millard F. Bowen, of Buffalo, who has been active in promoting this plan, is named among the incorporators.

H. R. 5636. Introduced by Mr. Mapes, (Rep., Mich.). Referred to the committee on interstate commerce. It proposes to adopt the plan recommended by the International Joint Commission for the construction of a deep waterway for ocean-going vessels from the Great Lakes to the Atlantic Ocean by way of the St. Lawrence river and Welland Canal. It appropriates $100,000.

S. 2415. Introduced by Mr. Ransdell, (Dem., La.). Referred to the committee on commerce. It proposes the creation of an inland waterways corporation to supervise operations of government-owned inland and coastwise waterways vessels. The corporation would be governed by the Secretary of War, with an advisory board of six members appointed from private life, who would recommend as to operation of government vessels.

H. R. 6870. Introduced by Mr. Christopherson, (Rep., S. D.). Referred to the committee on post offices. It proposes to make it unlawful to send through the mails communications threatening injury to persons or destruction of property, under a fine of $1,000 or imprisonment of two years.

H. R. 6947. Introduced by Mr. Sutherland (Rep., Alaska). Referred to the committee on territories. It provides for the election of the governor and secretary of Alaska for terms of four years, instead of their appointment as now provided.

SALE OF PUBLIC LANDS

Enormous revenues have been secured by the United States Government in the sale of its public lands, according to a tabulation just completed by the Department of the Interior through the General Land Office.

The figures representing receipts and expenditures since the beginning of the Nation's history up to June 30, 1923, show that the net profits amount to $339,411,874. The aggregate receipts from the sale of public lands total $491,300,484 exclusive of sales of Indian lands, while the expenditures reached $151,888,609. No other country in the world, it is believed, has ever made so much money out of its public domain.

In addition the tabulation shows that the Government has paid out $88,157,389 for purchase and cessions of lands of its public domain, and has paid to the Indians in quieting and purchasing their titles to portions of public lands as well as annuities a total of $208,776,031.

Because the records go back over one hundred years it was necessary for the General Land Office in order to obtain accurate data to first figure out the total cost of administering the public domain up to June 30, 1883, which amounted to $55,047,739. From that date the cost was $96,840,870 making a total for the entire period of $151,888,609.

SAFETY STATISTICS

Reports made by the various state mine inspectors to the Department of the Interior, through the Bureau of Mines, show that 2,452 men were killed by accidents at coal mines in the United States in 1923. Of these fatalities, 2,249 occurred as the result of accidents underground; 46 were due to shaft accidents, and 157 to accidents in and around surface plants. The production of coal during the year was 641,476,000 tons; hence the fatality rate for the year was 3.82 per million tons, as compared with 4.15 for 1922.

This reduction of 8 percent in the fatal-accident rate per million tons of coal produced in 1923 is equivalent to the saving of 210 lives, the Bureau of Mines points out, and is another way of saying that had the fatality rate of 1922 continued during the past year the number of lives lost would have been 210 more than actually were lost during 1923.

Not only was there a net reduction in the fatality rate from all causes combined, but each of the main causes of coal-mine fatalities also showed a decline. Falls of roof and coal, which generally account for nearly half of all deaths in coal mines, were responsible for 1,158 fatalities in 1923, which represents a rate of 1.81 per million tons, as compared with 1.90 in 1922. Haulage accidents underground usually cause about 18 percent of all fatalities, and the reports for 1923 show that 413 deaths were due to this cause, indicating a rate of 0.64 per million tons, as against 0.72 for the previous year. Gas and dust explosions killed 372 men, the fatality rate being 0.58; the previous year's rate was 0.65. Seventy-five deaths were due to electricity, for which class of accidents the fatality rate per million tons was 0.12 as compared with 0.16 the year before. Powder and other explosives caused 114 deaths, representing a rate of 0.18 as compared with 0.19 for 1922.

It is planned to replace the Mexican dollar and foreign coins in China with a new uniform Chinese silver dollar.

GOLD AND SILVER PROBLEMS OUTLINED

The Senate Gold And Silver Commission, In A Progress Report To The Senate, Presents Condition Of The Industry From Standpoint Of The Producers And Economic Welfare Of The Country

THE progress report recently submitted by the Gold and Silver Commission to the United States Senate advances no legislative proposals to overcome existing unsatisfactory conditions which operate against the producers. The commission outlines the basis of the mining industry, its relation to the progress of the country, and invites suggestions from producers as to what steps, either voluntary on the part of the industry, or by legislation, may be taken to relieve the present conditions and start the industry on a new field of industrial progress and prosperity.

The commission emphasizes the necessity of restoring proper relations between cost and selling prices. In this connection, it says:

"The best interests of the nation demand that capital invested in the development of its natural resources create new wealth, and unless the proper relation between cost and selling price is restored the present condition must inevitably result in the waste of invested capital, the loss of developed ore reserves, a loss of taxes, potential unemployment, low standards of wages and an imperiling of national safety, by bringing nearer the time of dependence of the United States upon foreign metal supplies.

"Furthermore, a large part of the production of these metals is being sold to foreign consumers and manufacturers at a price which is less than the cost of production. This condition is disastrous both to the nation and the producers.

"The only economic justification for the utilization of the limited metalliferous assets of the United States is that at the time of exhaustion the nation, through taxation, through its labor and through its mining operators, will be in possession of the equivalent worth of its exhausted metal assets, plus a proper accrued interest on the invested capital over the period of utilization. Only under such conditions can the nation as a whole receive and retain the full value of its natural resources."

Cost of Operation

In announcing its investigation as to cost of operation, investment and yield, the commission says:

"Detailed and accurate compilations and analyses of the direct and indirect operating and non-operating costs of mining, milling, smelting, refining, marketing and transportation will be made. In the final report these compilations will be made in detail covering all the principal operations involved in the production of these metals from the development and extraction of the ore to marketing of the metals.

"The compilations on investment will consist of the actual investment less depletion and depreciation in mines, mills, smelters, refineries, transportation facilities, and all other plants and equipment necessary in the recovery of the metals from the ore.

"The compilations and analyses of yield on investment will cover the yield on the investment by the various types and groups of mines. The comparisons on investment and yield on investment will consist of comparisons between various groups and types of mines and between the non-ferrous metal mining industry and the other basic industries.

"The problems of federal, state and local taxation of mines will be analyzed for the purpose of determining, so far as possible, the burden of taxation which exists at the present time. The equity and distribution of the burden of federal taxation is not entirely clear. State and local taxation in particular have become increasingly difficult problems for the mining industry to meet."

Special Problems

In outlining the special problems of the mining industry, the commission says:

"The mining industry has so far outgrown the governmental machinery for maintaining sound conditions in the industry that a number of serious problems have been allowed to develop. The future welfare and national security of the United States depends to a large extent upon the solution of these problems, which may be enumerated as follows:

"The high cost and inefficiency of labor and the immigration problem.

"The great burden of federal, state and local taxation.

"The inability or the failure of mining companies to consolidate sufficiently to enable the industry more rapidly to adjust itself without loss to the extreme variations in demand.

"The inability of the metal-mining industry of the United States to finance its exportable surplus and to carry the stocks of metals accumulated during periods of excess production or diminished markets.

"The inability of American producers so to cooperate with American and foreign producers in foreign countries as to meet the foreign competition of the strongly organized foreign selling agencies and consumers.

"The high cost of transportation.

"The inability to secure for the metals a price comparable to the present general index of other commodities. At the present time the metals of the United States are being mined and sold in the main at prices which are so low that they will not purchase more than one-half to two-thirds of their equivalent worth in other commodities, as indicated by prewar price relations, notwithstanding the fact that the cost of practically everything which is used in mining has risen comparably to the rise in the general index. This whole condition is entirely contrary to the best interests of national conservation and sound economics."

Government Aid Lacking

It is pointed out that:

"With the exception of the United States, all of the enterprising and progressive governments of the world, realizing their dependence upon the adequate supplies of the basic metals, are stimulating and encouraging the development of the mining industry within their boundaries, and are stimulating and encouraging the acquisition by their nationals of foreign deposits.

"With respect to the acquisition of foreign deposits, American interests have been safeguarded to some extent by the courage and enterprise of American capital which prior to the war acquired some important foreign deposits and thus prevented their control by foreign countries. Under the present conditions of the metal-mining industry, however, there is little inducement for American capital to undertake the risk of additional foreign mining investments."

Western Hearings

The commission refers to field hearings being conducted by Fletcher Hamilton in western mining regions, which testimony will be considered in preparing its recommendations to improve conditions in the discovery, exploration and development of gold and silver mines.

Statistics are given as to gold and silver production in this country last year. It is stated that the gold mining industry has been under continually in-

creasing economic pressure, as shown by decline in production of gold from siliceous ores and placer gravels.

"Heavy labor turnovers in many of the gold camps, a shortage of competent labor, and a general decline in the efficiency of labor have also contributed largely in keeping the industry in a subnormal condition," the report says.

It is stated that "the marked depreciation in the exchange value of gold indicates the high and prohibitive prevailing production costs which have continually operated to restrict production since 1915. Meanwhile, however, a great wastage has taken place in gold-ore reserves, mine equipment and capital invested in the industry, which represents a national loss as well as a loss to the industry."

Gold Standard Maintenance

The commission says American trade will improve when the gold standard is normal and that the United States should redistribute its gold reserve with as little inconvenience and disturbance to business as possible.

"When foreign countries are withdrawing our surplus gold, a normal output of newly produced gold from mines in the United States would assist in expediting the restoration of the gold standard and still further insure business stability," says the commission.

"Can the United States afford to lose its prestige as one of the principal gold-producing nations, to ignore the trade advantages and business stability which would come from expediting the return of the gold standard in foreign countries, and finally to become dependent upon foreign sources of supply for the basis of its monetary system?"

As to silver, the commission states that "should either the price of silver decline or the commodity price level increase in 1924, or both, the purchasing power of the silver ounce will still further decline, with continued adverse effects on production and the profitable operation of silver mines."

The commission says the action of the Treasury Department in revoking allocations of silver for subsidiary coinage reduced by 14,000,000 ounces the coinage which should have been purchased under the Pittman Act and caused the termination of purchases under that law two or three months earlier than was anticipated by the silver industry. This created a crisis in which many mines were forced to shut down. The commission believes that in organizing, the silver industry "has taken a forward step."

It also believes that many of the problems which beset the industry can be best solved through the united cooperation of the producers. Many of the problems confronting the industry do not lend themselves in any way to legislative solution, while the solution of others may require either amendments to present laws or new legislation. The commission is developing new information on the subject and will continue to make the same available for the use of the producers. The commission stands ready at all times to receive the suggestions of the producers, manufacturers and others interested in the industry regarding any needed modification in present laws affecting the industry or for any new laws which may be necessary, and will be glad to cooperate in their formulation and presentation to Congress.

Pittman Silver

An extensive review of the administration of the Pittman silver purchase act, including hearings held in Washington last spring, is included in a separate report by Senator Pittman (Dem., Nevada), which is made a part of the commission's report. In it is reviewed the enactment of the Pittman Act in 1918 and the melting of one hundred million standard silver dollars which were sold to Great Britain for its trade in India. The matter of allocating and later revoking the Pittman Act silver for subsidiary coinage is gone into at great length. It is declared that the Treasury Department had no authority to revoke these allocations. It is contended that the department is required to purchase sufficient silver at $1 per ounce to recoin twenty-nine million standard silver dollars which are involved in these transactions. It is announced that the subcommittee investigating these matters will present a bill directing the Treasury to complete purchases under the Pittman Act.

The concluding section of the report is devoted to investigations by the Bureau of Mines as to new uses for silver, in which it is stated that the bureau has $6,000 for these investigations for use until July 1, 1924, and that silver producers and fabricators should voluntarily contribute $10,000 for investigations until July 1. The Government plans to spend $15,000 beginning in July, and it is suggested that a like amount be contributed by the silver industry.

MOLYBDENUM

Molybdenum is a metal that has come into considerable prominence during the last few years, states the Department of the Interior in Bulletin 212, recently issued by the Bureau of Mines.

Up to a few years ago its main uses were in connection with the manufacture of magnet steel and chemical salts, such as ammonium molybdate and molybdic acid. The World War, however, brought molybdenum into prominence owing to its use in a number of special steels that were the result of considerable experimental work here and abroad. The result was a thorough investigation of the molybdenum deposits in this country, which showed that the United States probably has some of the largest, if not the largest, deposits of these ores in the world.

The two principal ores are molybdenite, or the disulphide, and wulfenite, or lead molybdate. There is frequently associated with the disulphide the mineral molybdite, or molybdic ocher. This is an oxidation product of the sulphide. The former mineral is usually found in flakes somewhat similar in appearance to graphite, although some molybdenite ores carry the mineral in a more or less granular form. Wulfenite crystallizes in tables which are usually yellow or orange, although they may have a reddish tinge. Molybdite is a canary-yellow mineral which looks somewhat like carnotite. Powellite is not a commercial mineral, and is frequently found associated with tungsten.

Molybdenum is principally used in the manufacture of special steels and alloys. It is also employed in the manufacture of chemical reagents, dyes, glazes, and disinfectants. Molybdenum steel is used for crank-shaft and propeller-shaft forgings, high-pressure boiler plate, rifle and gun barrels, armor plate, magnets, and iron for resistance furnaces, and in connection with chromium, vanadium, and other alloying elements in self-hardening and high-speed machine tools. During the war molybdenum steel was used in Liberty motors and for other purposes.

The analysis of molybdenum products is frequently difficult, owing to the number of other elements that may be associated with this metal. Some of the alloy steels are complicated, and the following elements may be encountered in molybdenum ores and alloys: Cobalt, chromium, nickel, iron, manganese, tungsten, vanadium, titanium, zirconium, copper, aluminum, zinc, carbon, silicon, phosphorus, arsenic, antimony, and bismuth.

Bulletin 212 contains analytical methods for molybdenum and various other rare metals, which have been thoroughly tested by the Bureau of Mines.

Copies of this bulletin may be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C., at a price of 40 cents.

COLORADO CHAPTER HOLDS ANNUAL MEETING

Revival Of Mining Major Theme Of Meeting—Government Aid For Gold And Silver Urged—Strong Resolutions Passed

THE annual meeting of the Colorado Chapter of the American Mining Congress and the Colorado Metal Mining Association, which convened at Denver, Colo., on January 22, was attended by the leading mining men in the State of Colorado. The principal theme of the convention was a revival of mining in the State, which at one time was Colorado's initial and major industry.

The resolutions passed were forceful and covered many pertinent subjects. The convention went on record as strenuously opposing all measures that tend to place hardships in the way of the Colorado miner or to decrease mining facilities. They advocated an effort to have Congress especially consider the gold and silver mining industry by liberal concessions in the way of taxation, in order to encourage the production of these metals.

The incoming president was asked to appoint a committee of five to inquire into and recommend measures for the rehabilitation of mining districts, particularly in the counties in the northern part of the State.

The association pledged complete cooperation with the Colorado School of Mines and with the work of the United States Bureau of Mines. It favored the work of the Forest Service in regard to reforestation and opposed generally any increased taxation for the industry.

Jesse F. McDonald, of the Downtown Mines Company, was elected president of the Colorado Metal Mining Association and the Colorado Chapter of the American Mining Congress. The directorate of the two organizations is interlocking and includes R. M. Henderson, first vice governor; E. A. Colburn, second vice governor; H. F. Lunt, third vice governor; M. B. Tomblin, secretary, and A. M. Collins, treasurer.

Important among the resolutions adopted are the following:

RESOLUTION No. 1

WHEREAS, Since its foundation the United States Bureau of Mines has been active and useful to the mining industry and has amply justified the efforts of the American Mining Congress which resulted in its creation; and

WHEREAS, A report by W. F. Willoughby, issued by the Institute for Government Research, proposes the abolition of the bureau and the transfer of all activities in connection with it to the Bureau of Standards and the Geological Survey; be it

Resolved by the Colorado Metal Mining Association in annual convention assembled, That we commend and thank the director and officers of the Bureau of Mines for their efforts and strongly endorse retention of the bureau; and recommend that Congress provide for its maintenance on at least as liberal a basis as heretofore.

RESOLUTION No. 4

WHEREAS, The existing income tax law exempts from tax the income of corporations derived from gold mining, but does not appear to exempt such income when derived by individuals or partnerships; and

WHEREAS, The mining of silver is equally necessary with that of gold to the prosperity of this country, and the stability of international exchange throughout the world; and

WHEREAS, The mining of silver, equally with that of gold, has been rendered unprofitable by economic conditions, for which the miner is not responsible; and

WHEREAS, The mining of gold and silver under present conditions rarely yields any profit; but the menace of confiscatory taxation on any profit that might be realized by an individual fortunate enough to secure a profit is a serious hindrance to raising capital for investment in gold and silver mining enterprises; now be it

Resolved by the Colorado Metal Mining Association in annual convention assembled, That we respectfully request the Congress of the United States, now in session, to remedy this inequality, and assist the miners of precious metals by exempting from taxation all income which may result from the precious metal mining industry; and be it further

Resolved, That copies of this resolution be submitted to the President of the United States, the Secretary of the Treasury, and to the senators and representatives from Colorado in the Congress of the United States.

RESOLUTION No. 5

Resolution adopted by the Denver County Metal Mining Association:

Resolved, That the incoming president of the Colorado Metal Mining Association appoint a committee of five to inquire into and recommend measures which will tend to the rehabilitation of the mining industry of Colorado, with special reference to the northern counties which are now without marketing facilities within a reasonable distance.

RESOLUTION No. 6

WHEREAS, In the many old mining districts of Colorado there are millions of tons of low-grade ores still available, both in the mines as ore in place, stope fillings and on the dumps, which were developed incidental to the past great production in this State;

WHEREAS, It is also a fact that there is a very incomplete record of this tonnage both as to character, grade and amount;

WHEREAS, There is very little exact data as to the extraction of the precious metals which could be obtained from these ores by the various milling methods that are now available, through old processes, and by the more efficient methods of mining that have been developed in late years;

WHEREAS, The State of Colorado maintains a school of mines at Golden, which institution can, by the adoption of the following course, become a leader in bringing the mining industry of Colorado back to the plane on which it deserves to be;

WHEREAS, The testing plant at Golden is to a great extent, and can easily be most efficiently, equipped to test and investigate through intelligent experiment any type of ore in the State, by the various methods that might be necessary;

WHEREAS, This plant, with approximately $200,000 value, contains equipment which it would be impossible for any individual company to have for mere testing, excepting the very largest corporations maintaining such establishments for their own private use;

WHEREAS, This Golden plant could be made available to the Colorado mining public for the purpose of working out their individual problems;

WHEREAS, A practical plan which would involve an engineer and assistants in the field, sampling and securing all the exact data possible of the tonnage in the several camps at the individual mines, coupled with a research metallurgical engineer at the School of Mines testing plant, all under the direction of the board of trustees of the Colorado School of Mines, would, at comparatively small cost, produce results which would be one of the most potent factors in bringing about a revival of mining such as is the hope of all of Colorado; now, therefore, it is

Resolved by the Colorado Metal Mining Association at the annual meeting thereof, January 22, 1924, That the officers of said Association do forthwith proceed to make a thorough study and investigation of the practicability, probable results, initial costs and maintenance costs of various detailed plans along the lines above set out;

That said officers of the Colorado Metal Mining Association consult frequently with metal mine operators throughout the State, and with the state metal mining officials, including the State Commissioner of Mines of Colorado, and the board of trustees of the State Metal Mining Fund of Colorado, in the course of such study and investigation, securing written suggestions and opinions from each of said officials as individual mining men and not simply as a board unit;

That the results of such study, investigation and consultation be embodied by the president and secretary of the Colorado Metal Mining Association in a written report to the next general meeting of the Association, prior to January 24, 1925;

That, should legislation be required to carry out the essential features of any one or more of the separate plans proposed to be adopted, proper legislative bills be duly drawn under the supervision of the officers of the Colorado Metal Mining Association and brought to the attention of the members of the General Assembly of the State of Colorado from each of the respective mining counties, at least one month prior to the convening of said General Assembly in the year 1925, in the shape of complete typewritten bills ready for submission to committees of the House and Senate;

That said report of the president and secretary, and such bills as have been drawn for the General Assembly, be duly submitted to the next annual meeting of the Colorado Metal Mining Association in January, 1925, for the consideration of the entire body, and for such changes or amendments as may then be deemed advisable;

That the mining members of the General Assembly be promptly advised by the secretary of any changes or amendments desired by the association in any bill or bills previously brought to their attention as above stated.

Resolution No. 10

WHEREAS, The burdens on the mining industry arising from heavy taxation, direct or indirect, form one of the greatest obstacles to its prosperity; and

WHEREAS, Sound economic doctrine regards unnecessary taxation as a serious evil, which, however, intended to be borne by the rich, inevitably falls on the people as a whole; be it

Resolved, That we, this annual convention of the Colorado Chapter of the American Mining Congress, commend and support the efforts of the present administration to reduce taxation, and urge renewed effort to reduce the expenditure of national, state and local governments.

Resolution No. 14

WHEREAS, The United States Geological Survey has for the past twenty years been engaged in a re-survey of the Leadville Mining District, Lake County, Colo., and in making a further study of ore deposits of that district; and

WHEREAS, The known ore bodies of marketable grade previously discovered in this district have, in the meantime, become largely depleted, and the mining industry there is suffering from the lack of intelligent development; and

WHEREAS, The publication and distribution of a report by the United States Geological Survey, covering the results of their thorough investigation of the district would prove of great value to the miners of Leadville, and of much interest to the whole metal mining industry; now, therefore, be it

Resolved, That the Colorado Metal Mining Association, in convention assembled, petition the senators from Colorado to urge upon the Geological Survey the necessity for their early completion of the Leadville Monograph, and the prompt publication and distribution of same; and be it further

Resolved, That a copy of this resolution be forwarded to the Director of the United States Geological Survey.

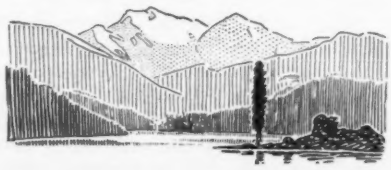
Resolution No. 15

WHEREAS, A supply of mine timbers is vital to the development of a mining district, and the cooperation of the Forestry Service with mine owners is absolutely essential; therefore, be it

Resolved by the Colorado Metal Mining Association of the State of Colorado in convention assembled, That the policy of the Forestry Service take into consideration, basing upon their actual figures and study of the situation, the conditions existing and controlling in the State of Colorado, and that the cutting of timber hereafter be conducted as follows:

A. No tract of timber will be sold for complete cutting as heretofore.

B. That the Forestry Service aid the counties in building and maintaining roads up the valleys and up into the higher portions of the mountains, in order that the timber may be taken out economically, as hereinafter recommended.



C. That mines may buy and cut from the forests, under the direction of the Forestry Service, such timber as they require in their operations, and at such times as they require it.

D. That when the mines require saw timber they may cut the trees from a designated section of government land, in such a way as to do the least possible damage to the forests, and to cut those timbers that are more mature and that would be more likely to decay.

E. When the mines require smaller timber, such as mine props and lagging, that they be required by the Forestry Service to cut from the smaller growths of Jack pine, in a way to thin out and advance the growth of the timber.

F. That the miners of the State, by and through the State Metal Mining Association, hereby tender their full cooperation to the Forestry Department in the carrying out of a policy for the best interests of the mining industry and in the preservation of the timber resources of the State.

Resolution No. 16

WHEREAS, U. S. Senate Bill 1182, for the reforestation of denuded areas and the protection of forest lands contains, in Section 8 of said bill, an authorization for the further withdrawal of public lands and their inclusion in forest reservations; and

WHEREAS, Although in favor of forest preservation and the principle of reforestation, we oppose the indiscriminate withdrawal of further areas of the public domain from entry under present laws; therefore, be it

Resolved, That the Colorado Metal Mining Association go on record as opposing the passage of said bill unless Section 8 be eliminated or so amended as to prevent such further withdrawal of public lands.

The Ingersoll-Rand Company announces the manufacture of a new type riveting hammer which embodies several new and improved features. This hammer is an interesting development in pneumatic riveter construction. Its outstanding features include bolted construction for holding the handle to the barrel; heavy section valve with liberal bearing surfaces; combination poppet and piston type throttle valve; power in excess of all ordinary requirements; low air consumption and exceptionally easy operation.

Full information will be gladly furnished by the company upon request.

MINE WATER AND ITS TREATMENT

A Discussion Of The Paper On This Subject, By J. R. Campbell, Of The H. C. Frick Coal Company, Which Appeared In The January Issue Of The Mining Congress Journal

By CHARLES HAYDOCK*

PRACTICALLY every industry uses large quantities of water which are subsequently discharged as more or less polluted waters. The coal mining industry does not use much water except where the coal is washed, but large quantities are encountered in mining and discharged as very hard or highly acid waters, or both. As a result, it has frequently been stated that the coal mining industry is the worst offender of all in the pollution of our streams and water supplies. With the continued growth of our country, it is becoming increasingly apparent that the fouling of streams by the uncontrolled discharge of polluted waste waters cannot be permitted to continue.

In highly developed industrial sections of the United States it is impossible to maintain or restore the pristine purity of our larger streams, and it is becoming increasingly difficult to protect any other than the smallest tributaries. In the average case, it is unnecessary to consider pristine purity as a standard, for the reason that the ability of a stream to absorb a certain amount of industrial wastes is an important natural resource that must be used. It is possible that the final purification of a water, whether it is to be used for industrial or domestic use, is properly a burden on the community or industry which desires to use it, but a community or industry should not be unduly handicapped by the presence of a large industry on the watershed above. The industries and the communities are interdependent. They must both continue to exist in close proximity and use large quantities of water which must be of a reasonable standard of purity.

As Mr. Campbell points out the broad questions of water pollution are being given an increasing amount of attention. Formerly the technical and industrial press considered chiefly methods of discharging the industrial waste waters. Now an increasing amount of attention is being given to methods of treatment and purification. Legislation also reflects this change in opinion. The present session of Congress will probably enact measures designed to prevent the pollution by oil of coastal waters and waterways. The principal reasons for the passage of this legislation are the necessity of protecting the coastal bathing beaches, the fire hazard in our large harbors by reason of oil on the waters, and the imminent danger of the total destruction of our shellfish and other fish industries along the coast. The hearings on oil pollution bills before the last session of Congress produced considerable discussion concerning the pollution caused by the coal mining industry, and for a time it appeared not unlikely that legislation affecting all navigable waterways would be enacted. This very clearly indicates the danger of the present situation. We do not have available all the information needed to enact wise legislation, nor do we know how to purify the waters which have been polluted by many of our most important industrial processes, including coal mining. There are undoubtedly some who will disagree with this statement, which is made without any intention of minimizing the splendid results which have been obtained in many instances in purifying industrial waste waters.

All of the methods of water purification and softening in common use simply alter the form of the impurities in solution and have but little affect on the total solids. They are therefore palliatives and not correctives. As Mr. Campbell points out, only the barium process will reduce total solids, and this process has not been developed on a commercial scale.

A reasonable starting point in meeting our mine drainage problem is to protect the streams which are now pure. This would impose no burden on existing industries, and would lead to a better appreciation of the value of water supplies and availability of wastes disposal as important items in the selection of industrial sites. Legislation enacted in Pennsylvania in 1923 was designed to protect existing pure streams, except as to the discharge from coal mines and tanneries, which were eliminated in order that the act might be uniform with previous legislation. This provides for a permit system of industrial waste discharge and the division of streams into classes, according to their present condition.

It might be disastrous to enact anti-pollution legislation which would impose serious burdens on our industries, but with the history of railroad legislation of the last twenty-five years before us, we cannot consider that this is impossible, and our united efforts, therefore, should be directed toward obtaining, first a thorough knowledge of extent, causes and effects of industrial stream pollution and, secondly, developing methods of purifying these industrial waste waters.

The American Water Works Association is carrying on a very important work through its committee on "Industrial Wastes in Relation to Water Supply." For two years this committee has been gathering information on the extent of pollution of public water supplies by industries and methods of purification of these wastes. Two progress reports, including a bibliography, have been published, and the committee is continuing its efforts. As this association is chiefly interested in domestic water supplies, the investigation is limited to that phase. While valuable data are being secured, it is unfortunate that the investigation is not being conducted from a broader viewpoint. The Engineers Club of Philadelphia held a very interesting conference on pollution of streams on October 26, 1923. The papers presented at this meeting, which extended over three sessions, are being published in Engineers and Engineering, which is the journal of the club. This meeting was very widely attended by several hundred representatives of industries and users of water, many of whom traveled long distances, and is a further indication of the wide interest the subject is attracting. These are important developments of the nature suggested by Prof. John W. Hallock, of the University of Pittsburgh, in his discussion of "Standardization of Mine Drainage from the Viewpoint of the Engineer."

Considerable information concerning industrial waste and stream pollution has been collected by various branches of the Federal Government. Having this and the importance of the subject in view, the Board of Direction of the American Society of Civil Engineers on April 3, 1922, adopted the following resolution, which resolution was duly transmitted to the proper authorities: "Resolved: That the United States Government be requested to undertake, through the Department of Commerce, a complete investigation of the cause, extent and effect of pollution of waters by industries, that methods of mitigating such evils be investigated, and that existing legislation be reviewed in order to determine what, if any, legislation is required to cope with the situation." There

*Engineer, Walter Companies, Philadelphia, Pa.

is but little danger of these various activities overlapping, as the field is so broad that there is room for all.

Colonel Roberts' paper, "Acids in the Monongahela River" (November, 1911, Proceedings of the Engineers Society of Western Pennsylvania), is still one of the most comprehensive papers on this subject, and it is unfortunate that it has not been more widely circulated, as it was discussed by many men who are familiar with the extremely polluted conditions of the rivers and streams of the Pittsburgh district. Since 1911, the pollution of the rivers has increased enormously, but without other material change in the situation.

The industrial history of the last ten or fifteen years includes many examples of profitable by-product recoveries from what were formerly waste products. It is not unreasonable to suppose that this will be the history of mine water purification, although up to this time no satisfactory methods have been developed or has it been possible to isolate products which give promise of profitable by-product recovery. The barium process has possibilities, but must certainly be operated regeneratively or else the barium reclaimed and disposed of; otherwise the cost is prohibitive. A thorough technical investigation should be made in an effort to devise a new method of water purification which will meet our modern conditions of purifying large volumes of highly polluted wastes. Such an investigation must necessarily be started in a laboratory, but must be tried out on a large scale, under the practical working conditions of cold weather and limited supervision, before any process can be considered a success.

The work which has been done by Mr. Campbell in connection with the Calumet Mine Drainage Treating Plant is of the greatest value, and one of the most important elements of value is his clear statement as to its objects and its accomplishments. There has probably been more misrepresentation of this plan, undoubtedly innocent by those who are not entirely familiar with it, than of any other similar plant in our country. It is a milestone of the greatest importance, and it is to such that we must look for future progress. The effluent from this treating plant is a vast improvement over the mine drainage, but cannot be used for any ordinary industrial purpose, as it is exceedingly hard. If softened by any of the commercial methods, the total solids are so high that serious difficulties are encountered in its use. The importance of this plant is that it improves the character of the drainage and is partly self-sustaining.

The chemistry of mine water is familiar to comparatively few. The distinction between free acidity and total apparent acidity is not appreciated in many instances, and it quite frequently happens that only total apparent acidity is determined. The importance of this distinction can hardly be over-emphasized. A water which is alkaline to methyl orange and acid to phenol phthalein is still high corrosive and rapidly attacks the ordinary ferrous metals.

Now that the interest of the entire country in the pollution of streams by industries is coming to be widely appreciated, and with the growth of cooperation in solving these problems no doubt much more rapid progress will be made in finding a solution. It is certainly to be hoped that some solution can be found before public opinion demands the passage of legislation which will detrimentally affect our basic industries, in which coal mining plays such an important part.

WM. B. DALY

Recently appointed General Manager of Mines, Anaconda Copper Mining Co. Mr. Daly is Chairman, Underground Transportation Section, Standardization Division, the American Mining Congress.

DEAD RECKONING IN COAL

(*Continued from page* 114)

ting the business. The union operator is paying the union scale and allowing his mines to lie idle.

Non-unionism, however, has abrogated all rules as to employment. Thus, a non-union operator, his sons, his cousins, his nephews, and in some cases, his grandchildren, are all working in the mines, side by side, with a few hired cutters, who class themselves as practical miners. The skilled work is being done by professionals. The day work—the rough work—is being done by the members of the family. These members of the family own neither clocks nor watches. They lay tracks, set switches, clean up the mine, and do the development work, after the employed men have left the job. One member of the family is equal to three employes.

The little mine may not be, in an academic sense, economical. However, it is subject to this kind of management and operation, and the cost of production is correspondingly low. The big mine, having to meet that competition, finds a selling price at the market which it cannot meet.

When all of this is sifted down to one conclusion, we are facing a great conflict between theory and practice these days. Theory on every score, however, is losing out. Theory says that we ought to have a business stabilized by big companies. Practice is proving that the most dangerous thing to the big company is the small mine with a propensity to become non-union. And, rather than moving toward stabilization, competition is running away from it.

THE REVENUE BILL OF 1924

(*Continued from page* 116)

these sections may apply retroactively in many cases.

THE MELLON PLAN

The plan of tax revision proposed by Secretary Mellon has been rejected by the House except as to the administrative changes proposed. What Congress will do finally with the Mellon plan remains to be seen. The early passage of the bill is not assured. A compromise is expected before the bill passes the Senate which will fix the maximum surtax rate at 35 percent. The fight over surtax rates will prove to be the principal obstacle. The proposal for a constitutional amendment which would permit the taxing of income from tax-exempt Federal, state and local securities has been defeated in the House. Taxpayers may hope for some reduction in taxes during this session of Congress. Whether or not the revenue measure which finally passes will actually reduce taxes for all classes of taxpayers in a manner that will be beneficial to the entire country, or will relieve some and shift the burden to others, will depend largely upon the attitude of Congress toward the soldiers' bonus, and the support which the Mellon plan receives from the public.

In 1920 the American Federation of Labor had 4,078,740 members. In 1923 it had 2,926,468 members.

STANDARDIZING UNDERGROUND TRANSPORTATION

Committee Of American Mining Congress After Four Years Study Makes Recommendations For Tentative Standards, Including Coal Mine Car Design, Hand Brakes, Mine Car Wheels, Mine Tracks And Signals And Locomotives

THE Coal Mining Section on Underground Transportation of the Standardization Division of the American Mining Congress has developed its work to the point where it has made definite recommendations for tentative standards in method, practice and equipment for adoption by the coal mining industry. In October, 1922, this committee submitted these recommendations to the General Mining Correlating Committee of the American Engineering Standards Committee. No definite action has so far been taken. The General Correlating Committee in January had so organized its work that the organizations listed herewith have appointed representatives to consider the reports submitted to it by the Standardization Division of the American Mining Congress—among which are the recommendations on underground transportation.

The other reports submitted to the Correlating Committee include:

Outside Coal Handling Equipment,
Mine Drainage,
Underground Power Transmission and Power Equipment,
Mine Ventilation (Coal and Metal).

Organizations and their representatives that will review these reports are:

AMERICAN INSTITUTE OF MINING AND METALLURGICAL ENGINEERS:

Mine Ventilation—Frank Haas, consulting engineer, Consolidation Coal Company, Fairmont, W. Va.

Underground Transportation—John J. Lincoln, general manager, Upland Coal and Coke Co., Elkhorn, W. Va.

Underground Power Transmission and Power Equipment—Harry M. Warren, electrical engineer, D. L. & W. R. R. Co., Scranton, Pa.

Mine Drainage—W. L. Affelder, assistant to president, Hillman Coal and Coke Co., Pittsburgh, Pa.

Outside Coal Handling Equipment — Andrews Allen, of Allen & Garcia Co., Isabella Building, Chicago, Ill.

THE ASSOCIATED COMPANIES:

J. H. Griftner, The Associated Companies, Hartford, Conn.

COAL MINING INSTITUTE OF AMERICA:

Thomas Mather, mine inspector, Tyrone, Pa.

Rush Hosler, Pennsylvania Compensation Rating and Inspection Bureau, Harrisburg, Pa.

THE AMERICAN MINING CONGRESS:

Mine Ventilation (Coal)—Carl Trik, Jeffrey Mfg. Co., Columbus, Ohio.

Mine Ventilation (Metal)—Chas. A. Mitke, Phoenix, Ariz.

Underground Transportation — C. E. Watts, Berwind-White Coal Mng. Co., Windber, Pa.

Underground Power Transmission—A. B. Kiser, Pittsburgh Coal Co., Pittsburgh, Pa.

Power Equipment—F. L. Stone, General Electric Co., Schenectady, N. Y.

Mine Drainage—Chas. H. Matthews, Westinghouse Elec. & Mfg. Co., E. Pittsburgh, Pa.

Outside Coal Handling Equipment—Colonel Warren R. Roberts, Wrigley Building, Chicago, Ill.

UNITED STATES BUREAU OF MINES:

Mine Ventilation (Coal)—J. W. Paul, Washington, D. C.

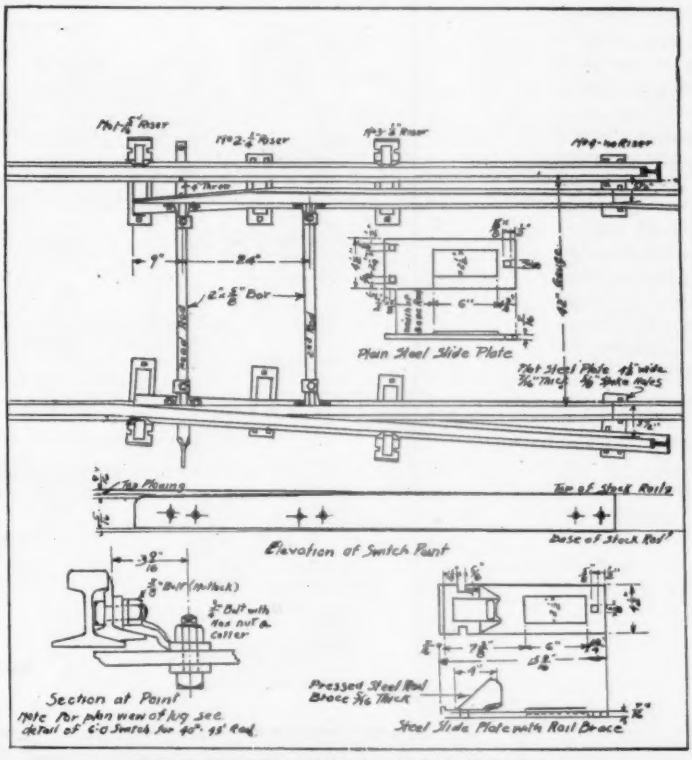
Mine Ventilation (Metal)—George E. McElroy, Butte, Mont.

Underground Transportation—
a. Mine Locomotives—L. C. Ilsley, Pittsburgh, Pa.
b. Design and Construction of Mine Cars—Frank E. Cash, Pittsburgh, Pa.
c. Mine Tracks and Signals—Frank E. Cash, Pittsburgh, Pa.

Underground Power Transmission and Power Equipment—
a. Standardization of Equipment—L. C. Ilsley, Pittsburgh, Pa.
b. Standardization of Practice—L. C. Ilsley, Pittsburgh, Pa.

Mine Drainage—
a. Pump Specifications — M. van Siclen, Washington, D. C.
b. Standard Practice—M. van Siclen, Washington, D. C.

Outside Coal Handling Equipment—H. W. Brooks, Pittsburgh, Pa.


Plan Steel Slide Plate
Elevation of Switch Point
Section at Point
Pressed Steel Rail Brace
Steel Slide Plate with Rail Brace

7' 6" SPLIT SWITCH. 40# & 45# Rail
For Main Entry Turnouts. Scale: ¾ In. Equals 1 Ft.

On May 29, 1923, the ninth regular meeting of the Committee on Underground Transportation was held at the office of Mr. J. Milliken, president of the Pittsburgh Testing Laboratory, Pittsburgh, Pa., who is chairman of the Subcommittee on Mine Car Design.

At this meeting the chairmen of the several subcommittees were present and a plan of action for the work for 1923 was decided upon. It was concluded that their report should take the form of a general review by each subcommittee of its past work, incorporate any changes or modifications in the reports of its past recommendations as deemed advisable, and suggest any new subject which would fit in with this review.

The thought was that since the several items submitted for "Recom-

mended Practice" in the past, having been open for discussion and criticism by the general public for two or three years, some modifications to same might be advantageous, and that this review would afford opportunity to incorporate any changes or additions that might be found advisable.

Mine Car Design

The Subcommittee on the Design and Standardization of Car Construction presented its first report to the American Mining Congress in Denver in 1920.

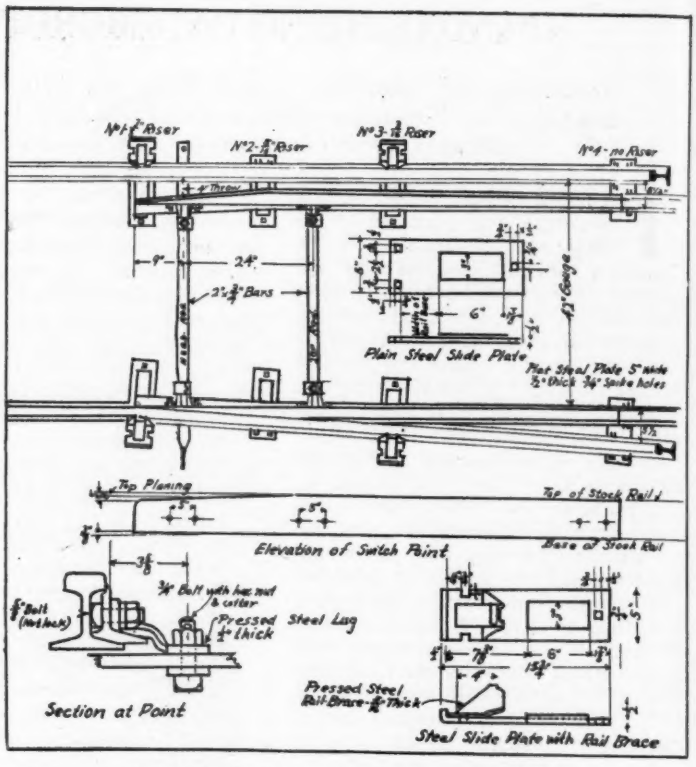
At this time, after having been in touch with the Track Committee, recommendations were made governing track gauge, minimum track curvature, wheel base of coal mine cars, maximum outside length of car body and, in addition to the above, four items, various details of car construction, were suggested.

In 1921 a meeting of the American Mining Congress was held in Chicago. The committee made a report of progress, advising of the appointment of committees on sizes and types of drawbars, bumpers and couplings; on sizes of rivets, bolts and irons for both wood, steel and composite car bodies; on sizes of lumber and steel shapes; on wheels; and on types of hand-brakes. Definite recommendations were made covering specifications of these materials, including the standards for steel plates, bars, shapes and rivets for grey malleable iron and steel castings and for bolts and nuts.

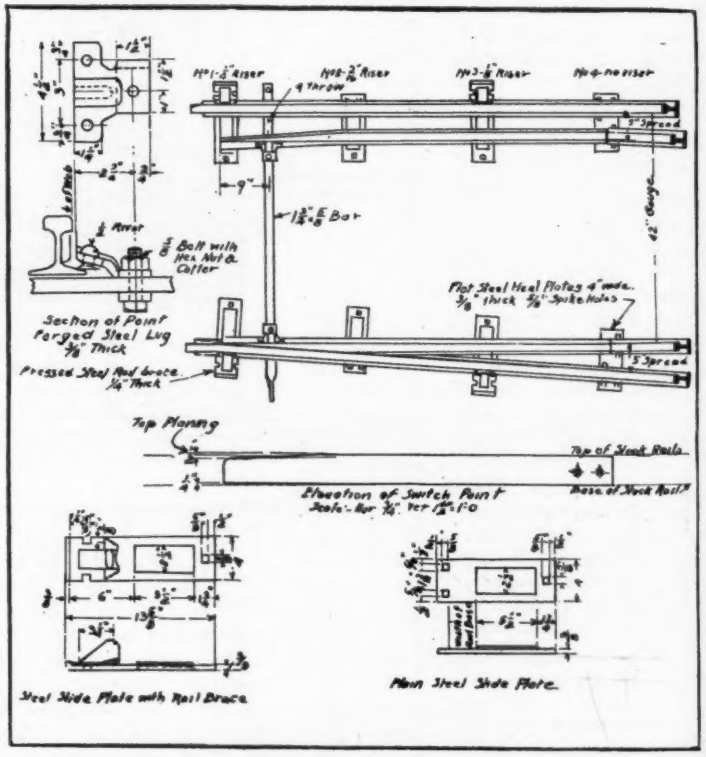
At the 1922 meeting of the American Mining Congress, which was held in Cleveland, this committee presented a comprehensive report covering standards for wheels for use in mine cars.

In the construction of mine cars many methods and practices are now in vogue that this committee would be very glad to consider and make recommendations for the best types of cars for the several types of commodities that will be handled and giving consideration to the types of mines in which they operate. A list of these items is given because the detail is not always grasped when a mine car just as a whole is considered:

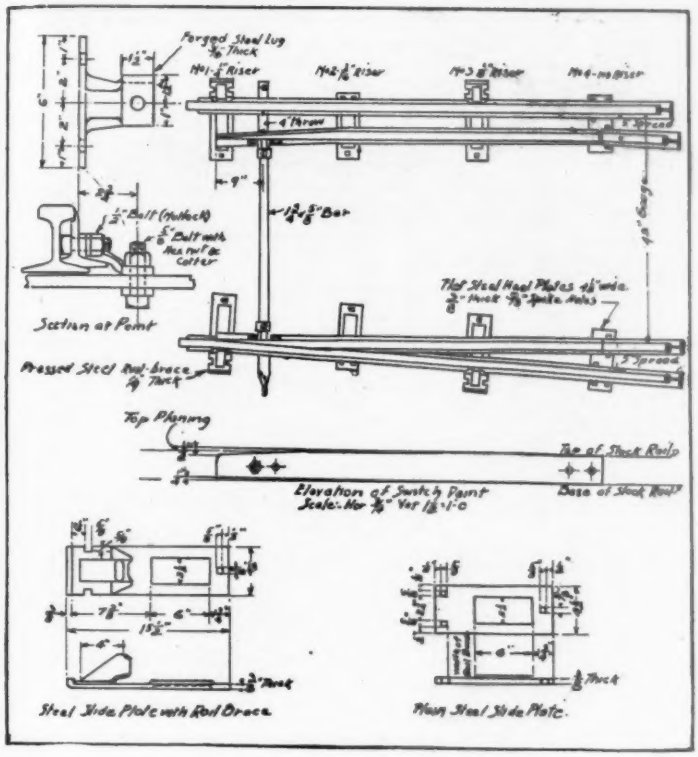
Material of Construction,
Steel,
Size of Mine Cars,
End Gates and Fastenings,
Drawbars,
Hitchings, Mine Car Couplings,
Pocket Bumpers,
Hollow Axles,
Fastening Axles to Bottom of Car,
Bearings,
Maintenance and Cars,
Wood,
Composite Cars,
How to Figure Capacity of a Mine Car,
Wagons with Tight Ends,
Bumpers,



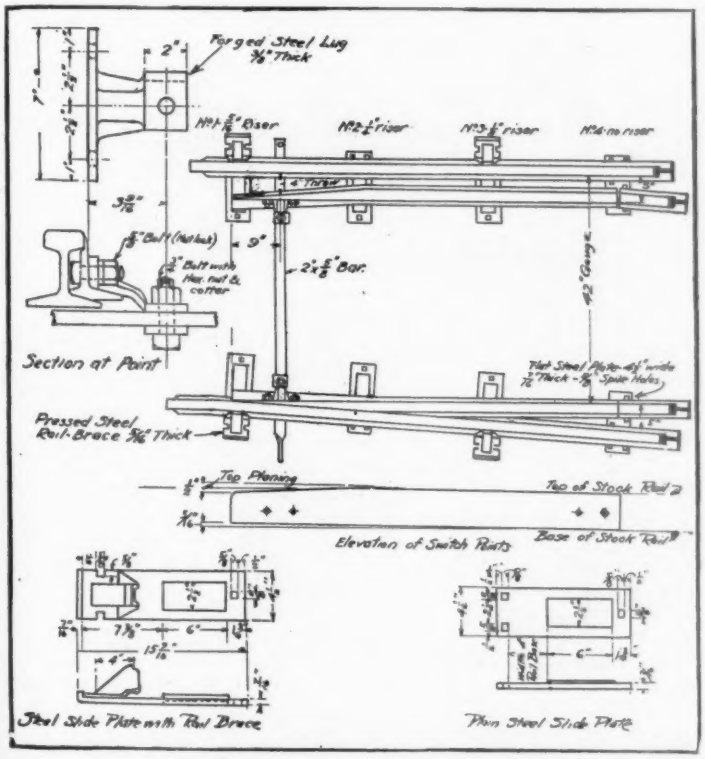
7' 6" SPLIT SWITCH. 50# to 60# Rail
For Main Entry Turnouts. Scale: ¾ In. Equals 1 Ft.



6' 0" SPLIT SWITCH. 25# Rail
For Butt Heading Turnouts. Scale: ¾ In. Equals 1 Ft.



6' 0" SPLIT SWITCH. 30# & 35# Rail
For Butt Heading Turnouts. Scale: ¾ In. Equals 1 Ft.



6' 0" SPLIT SWITCH. 40# & 45# Rail
For Butt Heading Turnouts. Scale: ¾ In. Equals 1 Ft.

Automatic Couplers; Spring Draw Heads,
Wheels and Axles,
Methods of Attaching Wheel to Axles,
Foundry Methods,
Lubrication,
Inspection of Mine Cars.

Mine Tracks and Signals

The sectional Subcommittee on Mine Tracks and Signals, of which Mr. Fred Norman, chief engineer, Allegheny River Mining Co., Kittanning, Pa., is chairman, has substituted new drawings covering criticisms of certain minor parts of switches. The former drawings were submitted with the report of 1921. The drawings herewith submitted are as follows: Two drawings of main entry turnout, three drawings of butt entry turnout, and two drawings of room turnouts.

The changes are made for the purpose of strengthening certain parts, such as flange clips, switch plates, heel plates, braces, etc., but do not change anything but minor detail, as more fully shown on drawings herewith submitted.

It was brought to the committee's attention that what is generally known as a "curved room turnout" has been adopted by a large number of mines, and quite generally in use in many sections of the country.

With this fact in view the committee wishes to add this "curved room turnout" as a standard turnout, to the other turnouts already recommended for standardization.

This turnout consists of a combination frog and closures in one piece, so that frog wing rails are elongated, one straight and one curved, to the point of junction with the switch, as shown on drawing, "Mine Turnouts—25-ft. Center Radius Room Turnout," herewith submitted.

This arrangement facilitates the laying of the turnout, which consists of only two parts, the frog and the switch, but has the drawback that the frogs must be made right and left, not being interchangeable from one to the other side of the track, when pointing in the same direction. This feature, however, is considered outweighed by the saving in labor of laying the turnout, elimination of joints, increased rigidity, and better alignment, as compared with short frog and closures.

The committee recommends this "Curved Room Turnout" for standardization as per drawing submitted.

The matter of cast frogs was discussed, and the committee made the following recommendations for further discussion, as per drawing herewith submitted of "Solid Cast Frog," comprising sizes from No. 1½ to No. 6, inclusive, for rail sections of No. 16 to No. 70, inclusive, in either plain or flanged

frogs of two classes for light and heavy equipment.

Class "A" is designed for equipment not to exceed 7½ tons axle loading, while Class "B" is designed for heavier equipment with axle loading over 7½ tons, and can be operated successfully with equipment having axle loadings up to 25 tons.

Manganese steel or equal is recommended for frogs when the axle loadings on operating units exceed 7½ tons and in cases of excessive traffic with lighter equipment.

The above conclusions were derived from the performance of the different kinds of frogs in service over a period of three years. It was found that the carbon steel frogs battered down under the heavier equipment, while the manganese steel frogs withstood the pounding successfully. For equipment with axle loading from 3½ to 6½ tons the carbon steel frogs that have been in service three years do not show any battering on the running surface, and but little wear.

The chemical composition of the carbon steel frogs was within the following limits and heat treated:

Carbon	.40 to .65
Silicon	.30 to .50
Manganese	.60 to .80
Sulphur not over	.08
Phosphorus not over	.06

Physical qualities: Tensile strength, 90,000 to 100,000 pounds; elastic limits, 45 percent of tensile strength; elongation, 15 percent.

The manganese steel frogs contained between 11 and 14 percent of manganese in the finished product with tensile strength not less than 120,000 pounds and elongation not less than 30 percent.

It may be well at this time to suggest a metal requirement for cast frogs, and in the absence of any experimental data on this subject the committee is offering the following specifications for metal requirements for carbon and manganese steel frogs, or equal, for discussion.

Carbon Steel Frogs

Chemical Properties:

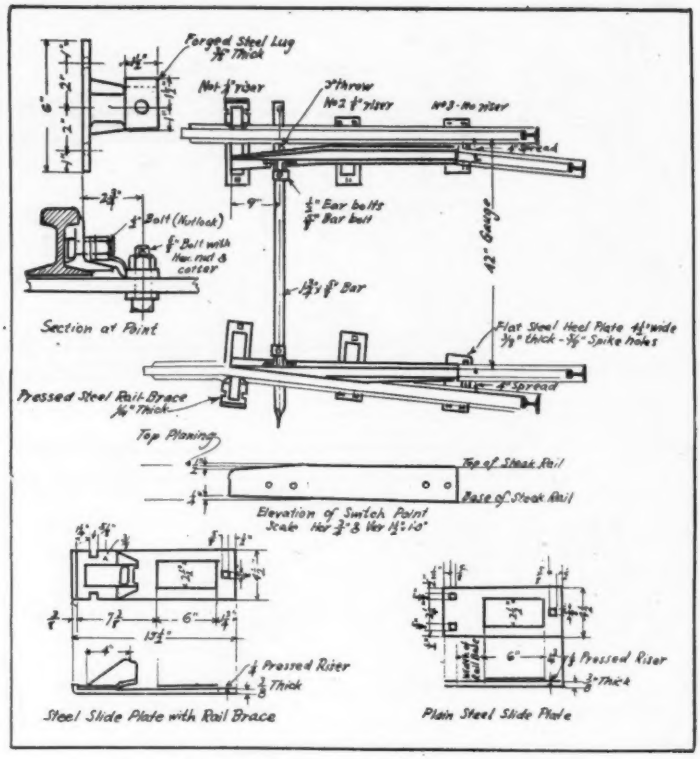
Carbon	.50 to .65
Silicon	.30 to .50
Manganese	.60 to .80
Sulphur not over	.05
Phosphorus not over	.06

Physical properties: Tensile strength, not less than 100,000 pounds per square inch; elastic limits, not less than 45 percent of tensile strength; elongation, not less than 15 percent; heated to 1,000 degrees C., then quenched in water.

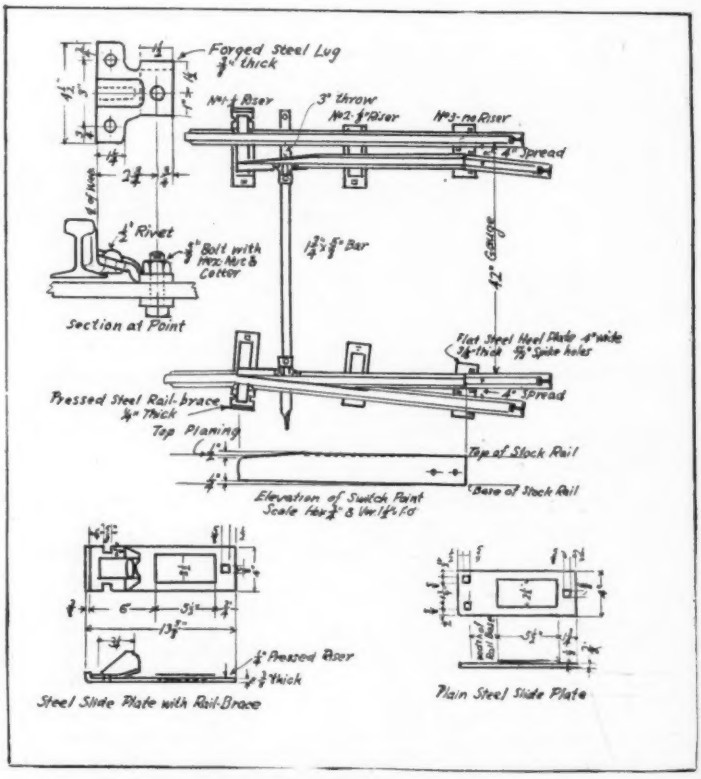
Manganese Frogs

Chemical Properties:

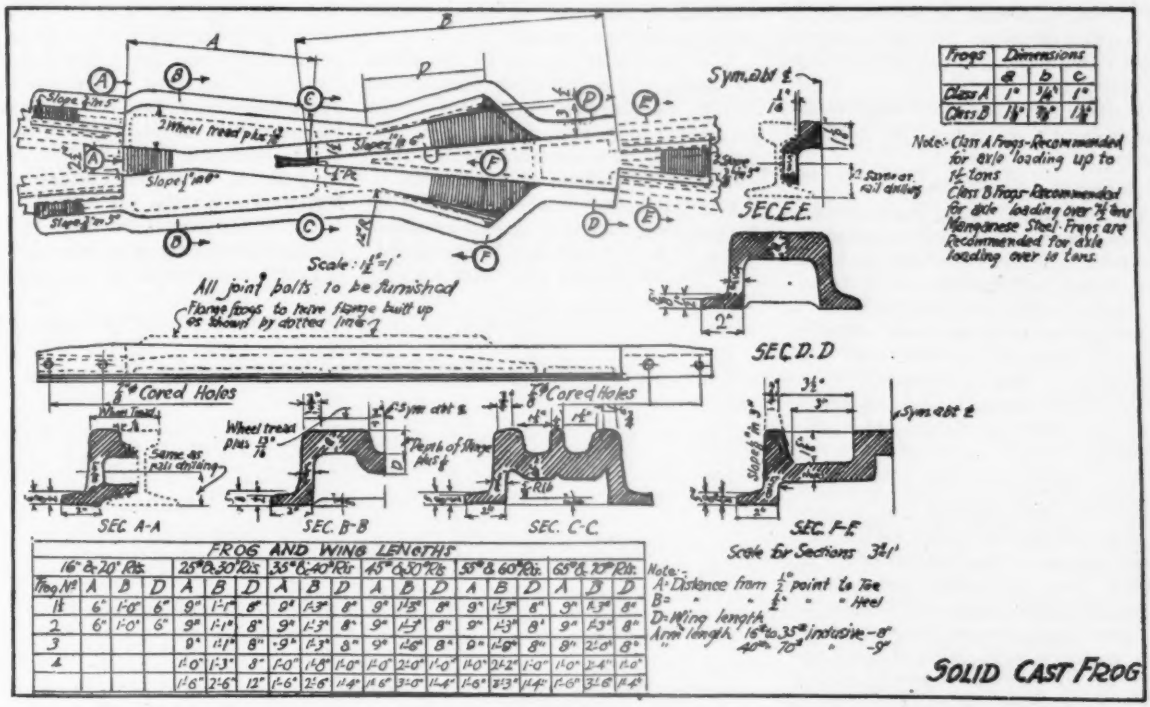
Silicon	.30 to .50
Manganese	11.00 to 14.00
Sulphur not over	.05
Phosphorus not over	.06



3′ 0″ & 3′ 6″ SPLIT SWITCH. 30# & 35# Rail
For Room Turnouts. Scale: ¾ In. Equals 1 Ft.



3′ 0″ & 3′ 6″ SPLIT SWITCH. 16# to 25# Rail
For Room Turnouts. Scale: ¾ In. Equals 1 Ft.


Frogs | Dimensions
a | b | c
Class A 1° 1/4" 1°
Class B 1½° 3/8" 1½°
Note: Class A Frogs-Recommended for ex/o loading up to 1½ tons
Class B Frogs-Recommended for axle loading over 1½ tons
Manganese Steel Frogs are recommended for axle loading over 10 tons.
Scale: ½"=1'
All joint bolts to be furnished
Flange frogs to have flange built up as shown by dotted lines
SEC. A-A
SEC. B-B
SEC. C-C
SEC. D.D
SEC. E.E
SEC. F-F
Scale for Sections 3"=1'
FROG AND WING LENGTHS
Note:-
A= Distance from ½" point to Toe
B= " " ½" " " Heel
D= Wing length
Arm length 15° to 35° inclusive - 8"
40° " 70° " - 9"
SOLID CAST FROG

16° & 20° Rds.			25° & 30° Rds.			35° & 40° Rds.			45° & 50° Rds.			55° & 60° Rds.			65° & 70° Rds.		
Frog №	A	B	D	A	B	D	A	B	D	A	B	D	A	B	D	A	B	D
1½	6"	1'-0"	6"	9"	1'-1"	8"	9"	1'-3"	8"	9"	1'-5"	8"	9"	1'-7"	8"	9"	1'-9"	8"
2	6"	1'-0"	6"	9"	1'-1"	8"	9"	1'-3"	8"	9"	1'-5"	8"	9"	1'-7"	8"	9"	1'-9"	8"
3				9"	1'-1"	8"	9"	1'-3"	8"	9"	1'-6"	8"	9"	1'-9"	8"	9"	2'-0"	8"
4				1'-0"	1'-3"	8"	1'-0"	1'-5"	1'-0"	1'-0"	2'-0"	1'-0"	1'-0"	2'-2"	1'-0"	1'-0"	2'-4"	1'-0"
				1'-6"	2'-6"	12"	1'-6"	2'-6"	1'-4"	1'-6"	3'-0"	1'-4"	1'-6"	3'-3"	1'-4"	1'-6"	3'-6"	1'-4"

Physical properties: Tensile strength, not less than 120,000 pounds per square inch; elastic limits, not less than 45 percent of tensile strength; elongation, not less than 30 percent; heated to 1,000 degrees C., then quenched in water.

Finish: All frogs to be foundry finish, straight in line and surface, free from twists, kinks, waves, cracks or any other injurious defects that will impair their strength or wearing qualities, with all burrs and rough edges removed.

Two types of frogs are recommended, plain and flanged.

The flanged frogs have all the operating advantages of the plain frogs with the additional advantage of the guarded feature, which is especially desired in loose wheel equipment, and do not require guard rail protection. Their disadvantage is that they must be designed for wheels with uniform treads; a much desired feature on all rolling equipment.

These frogs are designed flanged bearing to give additional support to the narrow tread wheel passing over the point of frog, and chamfered at heel and toe to take care of grooved ties. Both of these features add materially to easy running, service life and saving of wear and tear on rolling equipment.

Design as well as metal enters into the efficiency of the solid cast frog. In a certain case cast steel frogs designed along the lines of built-up frogs were put into service and lasted twenty-three days. A steel frog of the above design gave over a year of service without showing any excess wear. Riveted plate or bolted built-up frogs previously used at this point gave one year of service.

The reason for the poor performance of cast steel deep-flangway and built-up frogs was due to the narrow treads on wheels (3¼ in. to 4 in.) which are not wide enough to properly span the throat of the frog at the point causing excessive pounding, while the flange bearing frogs engage the flanges of the wheels at this point, giving the wheels sufficient support to eliminate any pounding until the treads are again firmly engaging the running surface of the frog.

This example is given as an illustration to prove design is an important factor in frog construction to secure maximum service. While the efficiency of the flange bearing carbon steel frog has not been definitely established, it seems that the ratio in favor of the cast steel frog is 3 to 1 over the built-up frogs, and slightly less in first cost. Manganese steel has a still larger ratio of efficiency than the carbon steel but costs more.

Mine Locomotives

The Subcommittee on Locomotives of the Underground Transportation Committee has submitted the following recommendations as tentative standards. In submitting the report, Mr. Graham Bright, chairman of the committee, said:

"A few years ago there was considerable confusion with regard to building mine locomotives, especially as to voltage, weight, speed and drawbar pull. To cut down a great deal of this confusion, and to put locomotive ratings on an equal basis, the Electric Power Club established some recommendations which have been fairly closely followed, and have resulted in a considerable saving by both the coal operators and the locomotive manufacturer. The Subcommittee of the Underground Transportation Committee has studied these rules closely, and has selected certain sections which have been followed closely by the locomotive manufacturers during the last few years, as the subcommittee feels that these should be recommended as standard practices."

The following standards are proposed:

Trolley Type

1. *Voltage Ratings:*

The standard direct current voltage for trolley type mine locomotives shall be 250 and 500 volts, and in order to obtain this voltage at the locomotive, the voltage at the point of generation shall not be greater than 300 or 600 volts.

2. *Locomotive Weights:*

The standard sizes of mine locomotives shall be as follows:

(a) For single motor locomotives, 1, 2½, 3, 4, 5, 6, 8, and 10 tons.

(b) For 2-motor locomotives, 4, 6, 8, 10, 13, 15, 20 and 25 tons.

(c) For 3-motor locomotives, 15, 20, 25, 30 and 35 tons.

3. *Drawbar Pull:*

The drawbar pull on a straight level track with dry clean rails shall be determined as follows:

Running drawbar pull—steel tread wheels, 25 percent of weight of locomotive.

Running drawbar pull—chilled wheels,

20 percent of weight of locomotive.

Starting drawbar pull with sand—steel tread wheels, 30 percent of weight of locomotive.

Starting drawbar pull with sand—chilled wheels, 25 percent of weight of locomotive.

4. *Rating of Locomotives:*

The locomotive rating shall be based on running drawbar pull in pounds on the level, and speed in miles per hour that motors will develop as determined at a rated voltage, making allowance of 5 percent for each spur gear reduction, and 7½ percent for each bevel gear transmission, and 1 percent of the weight of the locomotive loss of tractive effort in journals, flanges and other losses.

5. *Motor Ratings:*

Mine locomotive motors shall be given nominal ratings which shall be the horse power output at the armature shaft, excluding gear and other transmission losses which the motors will develop for one hour under normal rated conditions on a stand test with covers removed, and with natural ventilation, without exceeding a temperature rise of 75 degrees on all parts except the commutator on which will be allowed a rise of 90 degrees; temperature measurements to be made by thermometer.

Storage Battery Type

The weight of storage battery locomotives shall be based on the chassis weight, which is the weight of the locomotive exclusive of battery and electrical equipment. The standard weights of chassis shall be 6,000, 7,000, 8,000 and 10,000 pounds. The corresponding drawbar pull for each chassis weight shall be 1,000, 1,500, 2,000 and 3,000 pounds.

The standard voltage for storage battery locomotives shall be 80 volts, and the speed at the standard drawbar pull and at 80 volts shall be 3½ miles per hour.

For the coming year, it is recommended that the committee look into the following questions:

Speed of trolley type gathering and main haulage locomotives.

Car friction to allow for plain bearing cars.

Car friction to allow for roller or ball bearing cars.

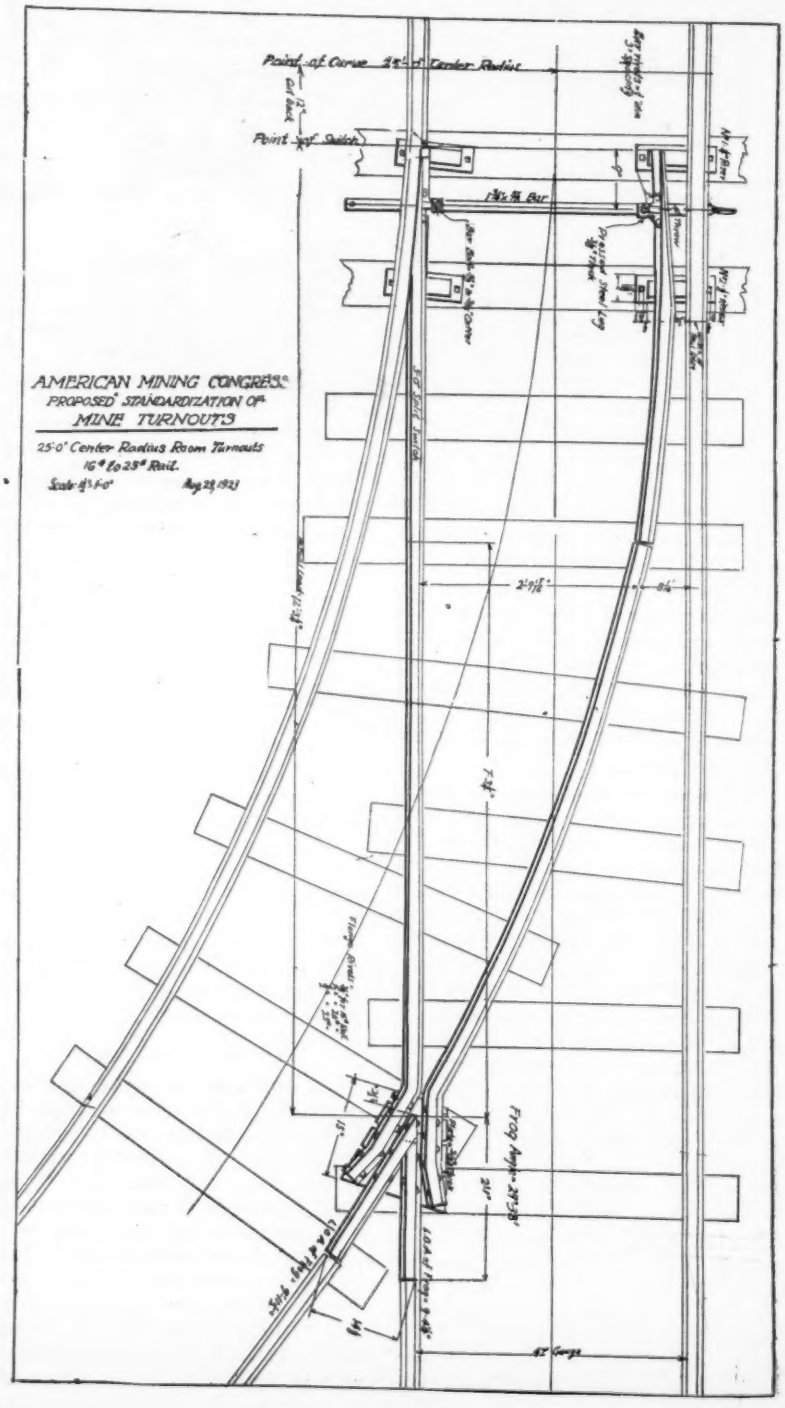
Curve friction.

Wheel flange and tread contour of locomotive wheels.

Believing that the best way to determine the stability of recommendations is to try them out and then make any changes that are necessary before the recommendations are adopted as permanent standards, these recommendations were submitted to the industry, through the Third National Standardization Bulletin, with the result that the following suggestions are made as improvements on the suggested standards:

The first is in regard to the speed of trolley type gathering locomotives. It is recommended that this speed be from 5 to 6 miles per hour. In the past it has been generally agreed that gathering locomotives should operate at 6 miles per hour. A considerable advantage, however, might be gained by allowing a little more latitude in this speed, as it has been found that, with a speed of 5 miles per hour, just as many cars can be gathered in a day's time as with 6 miles per hour, and a fair amount of power can be saved. It is seldom, in gathering service, that the full speed of the locomotive can be utilized, as most of the operation consists of very short runs, during which speed seldom gets as high as 5 to 6 miles per hour.

The second item is the speed for main haulage locomotives, and it is suggested that this be from 7 to 8 miles per hour.



In regard to the allowance for friction on mine cars, it has been suggested that this allowance be 30 pounds per ton for cars having plain bearings. Where cars are equipped with roller bearings, it is suggested that this value be 15 pounds per ton. It is true that in some cases, where roller bearings are not properly taken care of, the friction may be as high as 30 pounds per ton. Under the same conditions, however, a plain bearing may have a friction of 40 to 50 pounds per ton, so that, for good average conditions, a value of 15 pounds per ton should be obtained without difficulty.

Ball bearings on mine cars may reduce the value below 15 pounds per ton, but the use of ball bearings has not become general, and there is little data upon which to base any definite recommendations. It is, therefore, recommended that no account be taken of ball bearings on mine cars at this time.

It is suggested that the value to be used for curve friction be placed at 0.7 pounds for each degree of curvature. The street railways use a value of 0.5 pounds for each degree of curvature, but it is felt that for the narrow gauge industrial and mine work, it would be safer to use a value of 0.7 pounds. It is to be hoped that during the near future some reliable data can be obtained which will check this value of the curve friction. The fact that a small percentage of the cars on a trip can be on the curve at the same time makes this question of curve resistance relatively much less important than the friction on straight track.

The Electric Power Club has recently come to a decision regarding the question of wheel flange and tread contour. This is a question that has very little bearing on the operation of mine cars, but should have considerable bearing on the building of locomotive wheels, from a manufacturing standpoint. The shape of the wheel flange and tread will change shortly after the locomotive has been placed in operation, so that for over 90 percent of the life of the tire, a wheel flange and tread contour will be considerably different from that of the wheel when new, so that the only real object in standardizing would be the assistance given in cutting down the cost of manufacture.

The recommendations, together with comprehensive drawings, for standardization of mine car wheels were submitted by the chairman of the subcommittee on this subject, Mr. C. K. Witmer, Westmoreland Coal Co., Irwin, Pa., through the Third Standardization Bulletin, copies of which may be obtained from the American Mining Congress.

STANDARDIZING UNDERGROUND TRANSPORTATION

A Manufacturer's Viewpoint

By D. F. LEPLEY
Connellsville Mfg. and Supply Co.

WHAT would standardization of underground transportation equipment mean to the manufacturer?

Without a careful analysis the manufacturer might at first answer, "Nothing."

But let us try first to look into the matter a little before accepting that answer.

There is perhaps no other industry that must of necessity deal with such a great diversity of conditions as that of coal mining.

The Creator made and put the coal where it is. He gave it its diversified character and qualities in different localities.

He shaped the earth's surface and its relation to the coal beds and left it all for man to deal with.

Years ago, and perhaps even in more recent times, quite a few men have gone into the coal business, who really had no business to be in it, on account of their *lack* of engineering knowledge and experience, and money enough to open up, equip, and operate a mine on an economical and efficient basis.

The result is, or at least has been, a conglomeration of freaks and misfits in equipment that made it hard for the man, who had to take a coal business over when its promoter failed, to put it on an economical working basis.

I believe it has been understood by the Committee on Underground Transportation that it should include all of the equipment brought into service for moving the coal from the room in the workings to the tipple on the surface.

This of course would include cars, tracks, haulage motors (all kinds), haulage engines (rope, steam, and electric), hoist cages and skips, hoist engines (steam and electric), conveyors (belt, chain and pan).

On account of the great diversity of the conditions above referred too, found in the different coal fields and the different sections of the same field, I would consider it impracticable to attempt the standardization of all of the equipment of the present, and older mines, along hard and fast lines.

While there must always be more or less difficulty in doing this, even in new and modern developments, I am sure that a great deal can be done along this line in the operations of the future, that would mean much to the manufacturer of mining equipment.

Every manufacturer, if he would make the equipment fit the job, knows what it means to be obliged to work up a new design, and a full set of drawings and patterns, from "the ground up" on every contract for equipment, instead of producing his product on a regular "manufacturing" basis, like turning out nails and carpet tacks.

This, perhaps, is too wild a dream ever to be realized but yet, sometimes dreams come true.

Think of what it would mean in the cost of mine car building if all mine track gauges could be made the same, and a standard mine car truck built with wheel base, gauge, and axles the same, so that any size or capacity of car body could be mounted on it.

And if all mine tracks, supplies, frogs, switches, turnouts, etc., were standard; if all these were standard "stuff" like "Fords," it would save the mining people a lot of money.

It would be especially valuable to the manufacturer (as well as the miner) if he could build 50 cages all alike, at one time, instead of one or two; at least build all of the parts for them so that he could assemble one or a dozen promptly upon receipt of an order.

The same thing could be said of practically all of the different lines of equipment, such as skips, skip loading equipments, haulage motors, haulage and hoist engines, conveyors, etc.

However, let us not forget to look at another page of this story.

Suppose that the engineers and operators who fix and establish the standards for the manufacturer miss something, "miss a guess," and the manufacturers started in to "manufacture" a lot of "things" and then after a little while they are found not to "fit the job." Then what?

Or, suppose that the "development of the art," in some more or less complicated lines was not quite *complete* and the manufacturer suddenly had a call for a large production on that particular "standard" line and he *produced* it. I am wondering then how many people would be in trouble.

Then again, if some "dreamer," after a few years, were to dream out some "new and useful" invention; that the former "dreamers" had not visualized, that would soon make a new "up to date mine" look old; would you change your standards?

I do not believe it possible to ever

smother out the inventive ingenuity of the "genus homo."

Therefore, a diversity of improvements will always continue to be made in every line of human activity, including the mining industry.

This is progress and must not be lost sight of in our standardization program.

Perhaps, after all, it might be well in this matter, as in some others, to follow nature's way; to "make haste slowly."

There is no doubt in my mind, however, but that ultimately enough can be accomplished in standardizing our mining equipment to work out large economies for both the manufacturer and user. But in my judgment it must be accomplished through the close and unselfish cooperation in thought and effort, of the miner, the engineer, and the manufacturer through a period of years.

I believe that this program should rightfully be headed by the coal sales department, which is in constant touch with the buyer of the product.

Then let the miner and the engineer work out methods and ways for satisfying the buyers' demands, and call upon the manufacturer to invent and design suitable equipment, along certain fixed lines, to meet their requirements in the most efficient and economical manner.

No one can offer at this time a final solution for this complex problem. These few thoughts and suggestions are submitted for the consideration of those who are interested in applying practical and tentative standards.

George A. Drysdale, of Indianapolis, a metallurgist of note, has accepted the metallurgical editorship of the Foundry, published by the Penton Publishing Co. at Cleveland, Ohio.

Mr. Drysdale for a number of years has been metallurgical engineer for the Atlas Engine Works. His recent article published in the MINING CONGRESS JOURNAL, on "Mine Water and Its Action on Mine Drainage Equipment," was received with unusual interest by members of the mining industry. He has for the past year been chairman of the Subcommittee on Mine Water of the Drainage Section of the Standardization Division of the American Mining Congress.

ENGINEERS' SOCIETY PRESIDENT

Professor Fred Crabtree, head of the Department of Metallurgical and Mining Engineering at Carnegie Institute of Technology, has been elected president of the Engineers' Society of Western Pennsylvania. This organization, with a membership of 1,200, is one of the largest engineers' societies in the country.

CURRENT OIL SHALE NOTES

THE Pennsylvania Geological Survey has just issued a comprehensive and dignified report by Chas. R. Fettke, associate professor of geology and mineralogy at the Carnegie Institute of Technology, on the oil resources in coals and carbonaceous shales of Pennsylvania. Much of the work has been done on coals, although the oil shale deposits of the State are not neglected. Although these are much leaner than the oil shales of Colorado, and even of a grade lower than the shales of Kentucky, Ohio and Indiana, exact information about them is desirable as they form a part of the available sources of oil for the future.

The recent discovery of oil shale deposits at West Somerset, England, has aroused international interest. The lack of oil wells in Great Britain has caused her to import her oil supply from abroad, except that produced in Scotland from shale. The oil shale deposits in Norfolk and Dorsetshire are so impregnated with sulphur as to be non-commercial, until a cheap desulphurization process is discovered. The economic value of the West Somerset deposit is yet to be proved.

The Catlin Oil Shale Plant at Elko, Nevada, seems to have gained the distinction of being the first oil shale plant to operate successfully on a commercial basis. The Elko Lamoille Power Company has contracted with the Catlin Company for a supply of oil to run their Diesel engine. The contract was completed only after a careful test of the Catlin oil—a test which showed superiority over oils formerly used.

The California State Mining Bureau has just published a report by F. D. Gore, on the oil shales of Santa Barbara County, Calif. This deposit is different, both chemically and physically, from most other deposits, in that it contains an appreciable amount of crude oil which can be extracted by solvents such as benzol, chloroform and pyridine. Geologically the deposit lies in the lower series of the Monterey shales of the middle Miocene period. In the Casmalia field wells have penetrated these shales to a depth of 700 feet; in the Santa Maria field, to a depth of 2,000 feet.

The Ventura-Colorado Oil Company has recently secured patent to the Gold Oil group of claims, comprising thirty-two claims or a total of 4,947 acres, in Roan Creek, 20 miles northwest of Debeque, Colo. The cash payment involved $12,370.

In the district immediately adjacent to Grand Valley, Colo., there are 200,000 acres of rich, massive, and easily worked oil shale, beside 56,000 acres in the Naval Reserve. It is conservatively estimated that 86,700 barrels of oil can be produced from each acre.

The oil shale industry in Esthonia dates from November, 1918, when the German occupational forces left. The new Esthonian government, as the successor of the old Russian government, took possession of the oil shale deposits and established the oil shale industry, under the personal management of Nart Rand, a civil engineer. At the Kohtla-Järve mine 1,500 men are now employed. There are 21 locomotives, 600 dumping cars, and 66 houses at the plant. The houses comprise not only dwellings but a hospital, school, post office, bank and stores. At this spot a fierce battle occurred between the Esthonian army and the Russian bolsheviks.

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Shoes of aluminum, with wooden soles, are now made in Germany and used by workmen in chemical factories.

From a ship builder—

"I cannot let this pass without commendation

"Your special trip at an inconvenient time meant an important repair job completed without delay.

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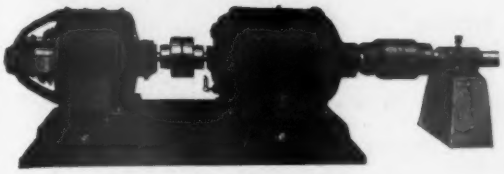

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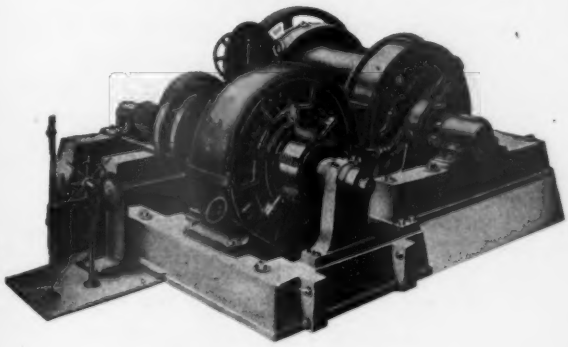

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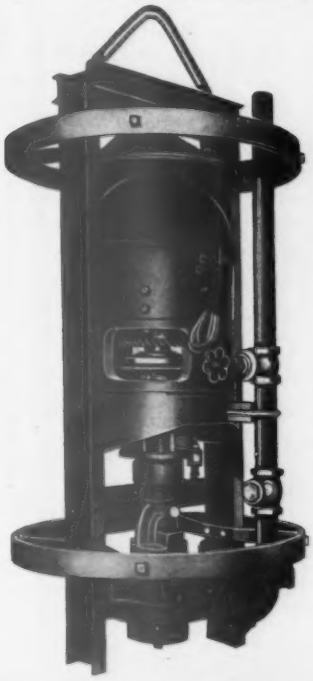

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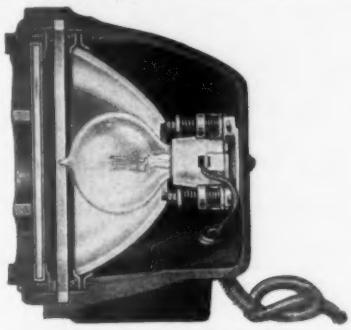

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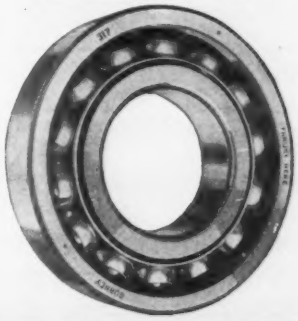

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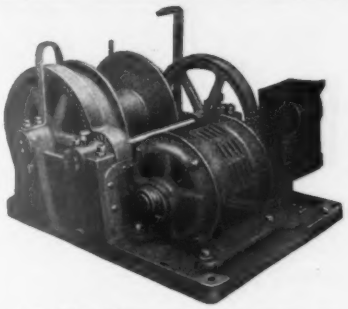

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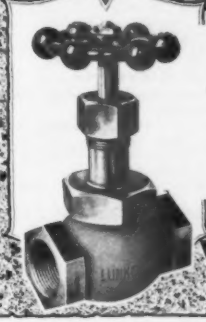

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SUB-COMMITTEE NO. 4—COOPERATION BETWEEN OPERATORS AND LUMBER DEALERS AND MANUFACTURERS, WITH A VIEW TO ASCERTAINING WHETHER FURTHER STANDARDIZATION IN SIZES AND SHAPES OF LUMBER UNDERGROUND WOULD RESULT IN A REDUCTION IN COST TO MINING COMPANIES.

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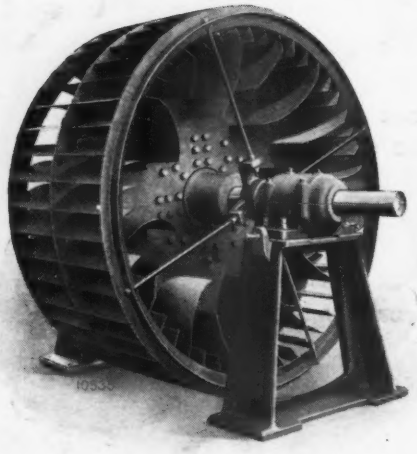

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